# CHAPTER SEVEN

# ROUTE ANALYSIS

The previous chapter of the Air Service Analysis identified a potential enplanement level for each study airport. The primary focus of this chapter is to determine if new or improved levels of service can be supported at each airport with the identified potential demand levels. To make this determination, the following factors are considered: number of hubs served, flight frequency, aircraft types, and airlines that may be able to be supported in each study airport community. It is important to note that this analysis assumed that demand at study airports will continue to be served primarily by flights to connecting hubs. The analysis reviews and evaluates each airport's ability to support economically self-sustaining commercial air service to connecting hub airports.

Commercial air service to the connecting hub in Phoenix will be evaluated as part of this analysis. With service to Phoenix, passengers from Arizona markets may either connect to America West flights or end their air travel in Phoenix. For other study airports, commercial air service to Las Vegas, a mini-hub for America West and a significant destination city for Arizona travelers, will also be analyzed for some study for its viability to attach and support additional airline service. It appears from previous analyses that a few of the markets in Arizona may be able to support service to a second hub, in addition to Phoenix. Additional hubs that may be served from each Arizona market, as applicable, are discussed in this chapter.

While commercial air service to Phoenix exists for most Arizona markets that currently have service by a scheduled carrier, intrastate air service between and among other cities in Arizona does not exist. Passengers from study communities can reach other Arizona communities with air service via connecting flights in Phoenix on America West Express or via general aviation charter service. Direct airline service from markets such as Sierra Vista to Bullhead City does not exist. As the primary business center in the State, Phoenix is a destination market from many of the communities served by study airports. People throughout Arizona have both business and pleasure travel to the Phoenix area because of its size and the variety of services provided in the Metropolitan area. Therefore, service to Phoenix as both a destination and as a connecting point is important to the study airports. Survey results from this study indicated that significant demand for instate commercial airline service between various Arizona cities, other than Phoenix, does not exist. Passengers, travel agencies, and businesses did not indicate the existence of sufficient demand to support commercial airline service between other markets in the State. The adequacy of the service provided from the study airports to Phoenix is, however, examined in this chapter. Direct scheduled commercial airline service to other Arizona communities, other than Phoenix is not examined.

The remainder of this chapter is devoted to providing information on the technical analyses carried out in this phase of the study. A description of the computer model used in the actual route

evaluation is also provided. Finally, the hub assignment and the subsequent route analysis for each study airport are described.

## 1. REVIEW OF AIRPORT TRAVEL PATTERNS

The first step to identify possible air service improvements for the study airports was to determine how passenger diversion from each airports' market area impacts each airport's USDOT reported origin and destination (O&D) travel patterns. Within the individual airport market areas, travelers require transportation to many different final destinations. The travel patterns for air passengers are compiled by the U.S. Department of Transportation (USDOT) through a survey of airline tickets. The USDOT's 10 Percent Ticket Survey requires airlines to continuously record and submit information from all tickets with serial numbers ending in zero. The continuous and comprehensive nature of the USDOT 10 Percent Ticket Survey makes it one of the most comprehensive means for determining specific travel patterns for a particular market area, unless markets are subject to significant levels of passenger erosion.

Data obtained from the USDOT 10 Percent Ticket Survey were used to identify the combined top O&D markets for all of the markets in the State of Arizona, including Tucson and Phoenix, with existing service. The reported combined 1997 top 10 O&D markets for all Arizona commercial service airports ranked in order of demand are shown below. For comparative purposes, the combined top O&D markets for only the study airports, minus Tucson and Phoenix data, were also reviewed and are presented below.

**COMPARISON OF TOP MARKETS**

| Rank | All AZ Airports | Study Airports |
|---|---|---|
| 1 | Los Angeles, CA | Phoenix, AZ |
| 2 | Las Vegas, NV | San Jose, CA |
| 3 | San Diego, CA | Seattle, WA |
| 4 | Denver, CO | San Francisco, CA |
| 5 | Chicago, IL | Denver, CO |
| 6 | San Francisco, CA | Portland, OR |
| 7 | Seattle, WA | Salt Lake City, UT |
| 8 | Ontario, CA | Sacramento, CA |
| 9 | Albuquerque, NM | San Diego, CA |
| 10 | Salt Lake City, UT | Dallas, TX |

Source: US DOT 10 Percent Ticket Survey

Only four of these top O&D markets for the study airports correspond to the top markets identified in the statewide summary. These four markets include San Diego, Denver, San Francisco, and Salt Lake City. As shown, the number one O&D market for the study airports was Phoenix; this

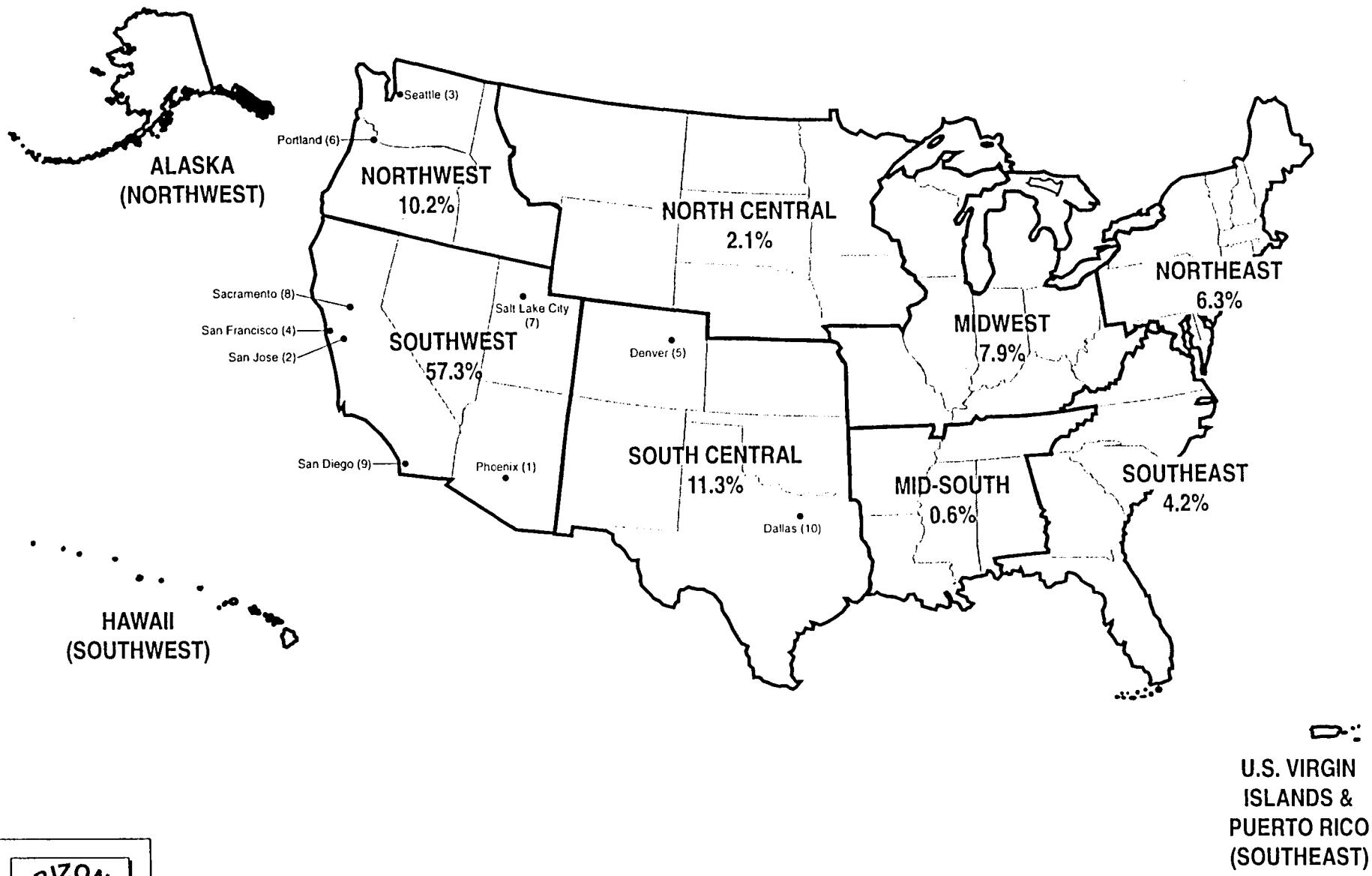
destination alone captured approximately 22 percent of the total demand generated by all the study airports. Survey results from this study, including travel agent and passenger surveys, showed that more than half of the study airports identified Phoenix as their top final travel destination. This high level of O&D demand and the survey results demonstrate the importance of commercial air service from the study airports to Phoenix to serve both business and personal needs.

The top destinations for the Phoenix and Tucson market areas were also examined separately and compared to the top destinations for the State and for the study airports. The top three destinations for Phoenix, Tucson, and the State were Los Angeles, Las Vegas, and San Diego. It can be concluded that the reported top travel destinations for Phoenix and Tucson impact the reported top destinations for Arizona as a whole. This is due to the high level of passenger activity that takes place at these two airports in comparison to the study airports. The passenger volumes at Phoenix and Tucson represent approximately 95 percent of total commercial airline passenger activity in the State.

The reported top O&D markets for the study airports identified through the USDOT survey were compared to information on O&D markets obtained from the surveys conducted at the outset of this study. The O&D destinations for the study airports reported in the USDOT data are generally consistent with O&D destinations identified from this study's surveys. Variations from survey data were noted related to specific vacation markets in Hawaii and Mexico. As previously noted, the survey results showed a high level of commercial air travel demand to Phoenix from the study airports. From the comparison of the USDOT data and this study's survey results, the reported top O&D markets identified by the USDOT survey for the study airports appear to be fairly representative of the actual markets identified and verified through this study's surveys.

In addition to looking at specific O&D markets, demand from the study airports was summed by destination among the 50 states and then summed by geographic region within the U.S. The aggregation of demand was accomplished by determining the number of passengers traveling between the base airports (in this case all of the study airports currently served by a scheduled carrier) and each market/city for which there are tickets purchased. By examining how demand is spread among the various regions of the U.S., the airline connecting hubs that are best suited to serve demand associated with the study airports can be determined.

**Exhibit 7-1** depicts the geographic distribution of passenger O&D demand from all study airports and the location of the top 10 markets obtained from the USDOT's survey for all study airports. As shown, destinations in the Southwest capture the highest level of combined passenger demand with over 57 percent of reported travel. For this study, the Southwest includes destinations in the states of Arizona, California, Nevada, and Utah. As previously noted, with Phoenix capturing such a high percentage of passenger demand from the study airports (over 22 percent) and with four of the top 10 O&D markets for the combined study airports being located in California, it is understandable that the Southwest region captures such a significant percentage of the aggregated passenger demand from the study airports.




ARIZONA DEPARTMENT OF TRANSPORTATION

Air Service study

GEOGRAPHIC DISTRIBUTION OF DEMAND FOR STUDY AIRPORTS

EXHIBIT 7:1

Each study airport's O&D demand was also regionalized on an individual basis. **Table 7-1** presents regional demand by study airport for comparative purposes. As shown, the Southwest captures between 41 and 90 percent of aggregated passenger demand generated for each of the study airports. The Midsouth region captures the lowest percentage of demand for all of the study airports. Regionalized passenger demand is used in subsequent analyses to evaluate the airline connecting hubs that are best suited to meeting the needs of the study airports.

## 2. HUB EVALUATION AND ASSIGNMENT

The next step in the process to evaluate air service at the study airports was to assign potential enplanements for the 13 study airports to various connecting hub airports, as deemed appropriate by the total passenger volume of the market being analyzed. By assigning each an airport's potential enplanements to various connecting hub airports, an assessment can then be made as to the feasibility of the market to support new or improved commercial airline service. Typically, smaller markets such as those being analyzed in this study have airline service to"true" connecting hub airports. However, for this analysis, Las Vegas was also considered as a service option for some of the study airports. Although Las Vegas is not a true connecting hub for any one airline, it is possible that air travelers from Arizona communities being analyzed in this study would find service to Las Vegas beneficial due to the high level of departures available from this airport, its numerous airline choices, and its competitive fares. Survey results and meetings held in conjunction with this study indicated that many markets located in the northwest section of Arizona have strong economic and transportation ties with Las Vegas. Therefore, airline service to Las Vegas was examined as an option for some markets.

Generally, most route systems operated by the nation's domestic scheduled commercial air carriers are of the hub and spoke nature. With the hub and spoke system, airlines shuttle passengers from the spoke cities (study airports) to the airline's connecting hub airport. Once at the hub airport, passengers generally board aircraft destined to another spoke city, which represents their final destination. This hub and spoke system works only when passenger demand levels between the spoke cities and the connecting hub airport are high enough to support economically viable commercial air service. The geographic location of the hub airport in relation to the spoke city is also a crucial factor in determining the feasibility of providing service to a particular hub. For some airports, scheduled airline service is only viable with regional/commuter carriers due to the number of enplanements associated with the airport. Depending upon the aircraft operated by the regional/commuter carrier, the spoke cities that can be served from any given connecting hub can be limited from a distance standpoint. As previously noted in this report, there are fewer airline connecting hub airports located in the West, therefore, there are fewer opportunities for smaller and rural markets to obtain airline service.

As identified in Chapter Six, the 13 study airports have varying levels of potential demand. For the hub evaluation, the 13 study airports were divided into three categories: large, intermediate, and small markets. These designations were made according to identified levels of potential passenger

TABLE 7-1

Arizona Department of Transportation
Arizona Air Service Study

REGIONAL DEMAND BY AIRPORT

| City | Regions | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Southwest | Midwest | South Central | Northeast | Northwest | Southeast | North Central | Midsouth |
| Bullhead City | 90.5% | 1.7% | 5.2% | 0.3% | 2.3% | 0.0% | 0.0% | 0.0% |
| Flagstaff | 55.3% | 10.5% | 14.1% | 8.5% | 5.9% | 3.2% | 2.0% | 0.5% |
| Grand Canyon | 78.7% | 0.6% | 14.2% | 0.0% | 6.5% | 0.0% | 0.0% | 0.0% |
| Kingman | 84.1% | 0.0% | 15.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Lake Havasu City | 65.1% | 11.6% | 10.0% | 2.4% | 4.2% | 1.0% | 5.7% | 0.0% |
| Page | 50.0% | 3.5% | 25.9% | 0.0% | 10.3% | 10.3% | 0.0% | 0.0% |
| Prescott | 68.9% | 7.4% | 12.1% | 3.2% | 5.5% | 1.4% | 1.5% | 0.0% |
| Sierra Vista | 59.7% | 5.2% | 14.9% | 8.2% | 3.0% | 7.6% | 1.4% | 0.0% |
| Yuma | 41.4% | 8.8% | 11.1% | 8.1% | 19.7% | 7.0% | 2.7% | 1.2% |
| Combined Study Markets | 57.3% | 7.9% | 11.3% | 6.3% | 10.2% | 4.2% | 2.1% | 0.6% |
| Overall State (including PHX and TUS) | 38.9% | 16.6% | 14.9% | 11.0% | 6.3% | 5.8% | 4.6% | 2.0% |

demand for each study airport. Markets with over 75,000 potential enplanements were categorized as large; airports with more than 10,000 but less than 75,000 potential enplanements were categorized as intermediate; and airports with less than 10,000 potential enplanements were categorized as small.[1] **Table 7-2** depicts information about each airport, including its potential enplanement level, average enplanements per day, and its assigned market size category. Again, it is important to note that for this analysis, market size describes the level of potential enplanements, not the total unconstrained level of passenger demand for each market.

**TABLE 7-2**

**POTENTIAL ANNUAL ENPLANEMENTS**

| City | Market Size | Potential Enplanements | Average Enplanements Per Day |
|---|---|---|---|
| Bullhead City | Large | 120,176 | 329 |
| Flagstaff | Large | 98,670 | 270 |
| Grand Canyon | Small | 15,824 | 43 |
| Kingman | Small | 8,643 | 24 |
| Lake Havasu City | Intermediate | 24,619 | 67 |
| Page | Intermediate | 34,626 | 95 |
| Prescott | Intermediate | 19,130 | 52 |
| Safford | Small | 5,640 | 15 |
| Sedona | Small | 6,284 | 17 |
| Show Low | Small | 6,964 | 19 |
| Sierra Vista | Intermediate | 27,305 | 75 |
| Winslow-Holbrook | Small | 4,298 | 12 |
| Yuma | Large | 107,379 | 294 |

Source: Wilbur Smith Associates and AirTech, Inc.

Because different-sized markets can support various levels of service, the hub evaluation and assignment process was tailored for each market size category. The methodologies used for each market size category are discussed in the following sections.

## A. Large Communities

As shown in Table 7-2, the average number of potential enplanements for the large communities ranged from 270 to 329 per day. It is possible that with this level of potential demand, service to more than one airline connecting hub could be supported. Yuma, for example, already supports service to two hubs (Phoenix and Los Angeles). Therefore, for

[1]Grand Canyon was not categorized for the purposes of this analysis due to its unique service characteristics. Given the high level of tourist-based airline charter service and the low level of population in the region, potential enplanements were not identified for the Grand Canyon market.

the large communities, the first step in this process was to review, evaluate, and rank the relative strengths of the various connecting hub airports, including those which are already served from study airports. Various hubs were considered for different market sizes based on factors such as distance and airline choices.

Several possible hubs and "hubbing" airlines were evaluated for the large community markets including Denver, Las Vegas, Los Angeles, Phoenix, and Salt Lake City. These hubs were selected based on their geographic proximity to the large study airports. **Table 7-3** depicts the distances from the large communities to the hubs considered in the analysis.

**TABLE 7-3**

**DISTANCE FROM LARGE COMMUNITIES TO HUBS**

| City | Denver | Las Vegas | Los Angeles | Phoenix | Salt Lake City |
|---|---|---|---|---|---|
| Bullhead City | 621 | 84 | 230 | 179 | 416 |
| Flagstaff | 487 | 214 | 394 | 116 | 386 |
| Yuma | 731 | 246 | 240 | 159 | 578 |

Source: U.S. Census

Distance to connecting airline hubs is an important factor when considering the viability of service. Regional/commuter carriers operating conventional turboprop aircraft serve markets within a 400-mile radius of the connecting hub. However, new generation regional/commuter aircraft, particularly those that are used by carriers who code-share with the large major airlines, have extended stage length capabilities. Many regional/commuter carriers have purchased or plan to purchase small regional jets. The Canadair Regional Jet used by SkyWest, ASA, Mesa, Atlantic Coast Airlines, and Comair; the Embraer 145 operated by Continental Express and Trans States; and the Avro RJ-70 operated by Business Express all fall into this small jet category. Even the Dornier 328 turboprop can be operated on stage lengths of over 700 miles. Therefore, more distant hubs may in some instances present additional options for connecting hub opportunities.

The airline hub review examined the level of service (as measured by the number of daily departures) and geographic coverage (as measured by the number of daily flights to each state) provided at each connecting hub airport examined in this analysis. This was accomplished by obtaining schedule data from the Official Airline Guide (OAG). For each hub examined, the number of daily nonstop departures on a typical weekday to every state in the U.S. was identified. **Table 7-4** presents this data.

By examining the number of daily nonstop departures provided from each connecting hub to each state, each airline hub was evaluated to determine the probability of passengers traveling from the three large markets to each state utilizing that particular hub. The demand to each state from the large community markets was reviewed prior to analyzing the potential

TABLE 7-4

Arizona Department of Transportation
Arizona Air Service Study

DAILY NONSTOP DEPARTURES BY HUB AIRPORT BY STATE

| State | Denver | Las Vegas | Los Angeles | Phoenix | Salt Lake City |
|---|---|---|---|---|---|
| Alabama | 0 | 0 | 0 | 0 | 0 |
| Alaska | 0 | 0 | 0 | 0 | 2 |
| Arizona | 25 | 47 | 51 | 50 | 17 |
| Arkansas | 0 | 0 | 0 | 1 | 0 |
| California | 82 | 162 | 417 | 175 | 50 |
| Colorado | 68 | 17 | 23 | 44 | 24 |
| Connecticut | 1 | 0 | 0 | 0 | 0 |
| Delaware | 0 | 0 | 0 | 0 | 0 |
| DC | 9 | 1 | 13 | 4 | 3 |
| Florida | 11 | 5 | 18 | 2 | 2 |
| Georgia | 14 | 8 | 14 | 12 | 10 |
| Hawaii | 0 | 0 | 23 | 1 | 0 |
| Idaho | 4 | 2 | 0 | 0 | 36 |
| Illinois | 30 | 15 | 46 | 19 | 10 |
| Indiana | 4 | 4 | 1 | 2 | 0 |
| Iowa | 6 | 0 | 0 | 4 | 0 |
| Kansas | 12 | 1 | 0 | 2 | 0 |
| Kentucky | 0 | 0 | 0 | 1 | 0 |
| Louisiana | 3 | 1 | 1 | 2 | 2 |
| Maine | 0 | 0 | 0 | 0 | 0 |
| Maryland | 6 | 1 | 4 | 3 | 0 |
| Massachusetts | 8 | 2 | 10 | 3 | 4 |
| Michigan | 7 | 6 | 4 | 9 | 2 |
| Minnesota | 15 | 6 | 6 | 8 | 7 |
| Mississippi | 0 | 0 | 0 | 0 | 0 |
| Missouri | 24 | 11 | 11 | 23 | 10 |
| Montana | 8 | 0 | 0 | 0 | 21 |
| Nebraska | 26 | 3 | 2 | 5 | 2 |
| Nevada | 16 | 16 | 75 | 44 | 25 |
| New Hampshire | 0 | 0 | 0 | 0 | 0 |
| New Jersey | 0 | 0 | 0 | 0 | 0 |
| New Mexico | 19 | 6 | 6 | 27 | 5 |
| New York | 22 | 13 | 53 | 18 | 9 |
| North Carolina | 2 | 1 | 4 | 1 | 0 |
| North Dakota | 9 | 0 | 0 | 0 | 0 |
| Ohio | 12 | 9 | 11 | 14 | 8 |
| Oklahoma | 9 | 2 | 0 | 6 | 3 |
| Oregon | 9 | 8 | 17 | 9 | 8 |
| Pennsylvania | 10 | 6 | 10 | 8 | 2 |
| Rhode Island | 0 | 0 | 0 | 0 | 0 |
| South Carolina | 0 | 0 | 0 | 0 | 0 |
| South Dakota | 10 | 0 | 0 | 0 | 3 |
| Tennessee | 3 | 3 | 8 | 2 | 0 |
| Texas | 43 | 39 | 45 | 71 | 14 |
| Utah | 16 | 12 | 14 | 13 | 11 |
| Vermont | 0 | 0 | 0 | 0 | 0 |
| Virginia | 0 | 0 | 0 | 0 | 0 |
| Washington | 17 | 8 | 23 | 12 | 17 |
| West Virginia | 0 | 0 | 0 | 0 | 0 |
| Wisconsin | 5 | 2 | 2 | 2 | 15 |
| Wyoming | 31 | 0 | 0 | 0 | 0 |
| **Total** | **596** | **417** | **912** | **597** | **322** |

Source: Official Airline Guide (OAG)

hubs. **Table 7-5** presents the potential demand for each of the markets, allocated by state. This allocation of potential demand by state shows where passengers are traveling to and from. Using potential demand by state, the most logical routing to serve this demand via the various hubs was examined.

In general, three factors were considered in evaluating each connecting hub's ability to capture passenger demand from each market to each state:

- The general geographic relationship of the hub under consideration to the destination state
- The number of daily weekday departures offered from that hub to the destination state
- The circuity of travel to the passenger's final destination state via that hub

Based on these three factors, the following capture rates were assigned to each hub/state combination:

- None (0 percent)
- Low (25 percent)
- Medium (50 percent)
- High (75 percent)
- Very High (100 percent)

These capture rates were used to reflect the number of potential air passengers that could logically use commercial air service to each of the airline connecting hubs, assuming such service were available. The demand assigned to each hub represents not only the airport's demand for this particular city and state, but for all destinations that could logically be reached through that particular hub. For example, a traveler from the Flagstaff area whose final destination is a city in Illinois could travel by air to Illinois via connecting service offered from several hub airports. Los Angeles and Denver each offer more than 30 flights daily to Illinois; for a traveler from Flagstaff, these two hubs provide the best service to Illinois. Both Phoenix and Las Vegas also offer a relatively good level of service with 19 and 15 daily departures, respectively. Of these four hubs, considering the final destination is Illinois, Los Angeles is not really an attractive hub for a Flagstaff traveler because it requires the traveler to fly in the opposite direction (west), before heading east to their final destination. Each hub/state combination was analyzed separately for each of the large community markets to rank the hub's ability to serve demand for each state from the market via each hub.

The hub assignment process used for each of the large community airports is discussed in the following sections.

TABLE 7-5

Arizona Department of Transportation
Arizona Air Service Study

DEMAND ALLOCATION BY STATE

| State | Bullhead City | | Flagstaff | | Yuma | |
|---|---|---|---|---|---|---|
| | Percent of Potential Demand | Total Potential Demand by State | Percent of Potential Demand | Total Potential Demand by State | Percent of Potential Demand | Total Potential Demand by State |
| Alabama | 0% | 0 | 0% | 0 | 0% | 468 |
| Alaska | 0% | 0 | 0% | 0 | 0% | 330 |
| Arizona | 30% | 36,005 | 17% | 17,257 | 21% | 22,492 |
| Arkansas | 0% | 0 | 0% | 0 | 0% | 165 |
| California | 60% | 71,753 | 32% | 31,591 | 13% | 13,751 |
| Colorado | 1% | 1,359 | 5% | 5,399 | 4% | 4,542 |
| Connecticut | 0% | 0 | 0% | 17 | 0% | 69 |
| Delaware | 0% | 0 | 0% | 0 | 0% | 0 |
| District of Columbia | 0% | 0 | 1% | 1,418 | 2% | 2,423 |
| Florida | 0% | 0 | 2% | 1,811 | 2% | 2,216 |
| Georgia | 0% | 0 | 1% | 1,367 | 2% | 1,844 |
| Hawaii | 0% | 0 | 0% | 0 | 1% | 785 |
| Idaho | 0% | 0 | 0% | 188 | 1% | 1,432 |
| Illinois | 1% | 992 | 2% | 1,794 | 2% | 1,817 |
| Indiana | 0% | 0 | 1% | 1,469 | 1% | 1,046 |
| Iowa | 0% | 0 | 0% | 0 | 0% | 55 |
| Kansas | 0% | 73 | 0% | 290 | 0% | 358 |
| Kentucky | 0% | 0 | 0% | 0 | 0% | 138 |
| Louisiana | 0% | 0 | 0% | 359 | 0% | 248 |
| Maine | 0% | 0 | 0% | 0 | 0% | 0 |
| Maryland | 0% | 0 | 1% | 786 | 1% | 1,060 |
| Massachusetts | 0% | 0 | 3% | 2,546 | 2% | 1,776 |
| Michigan | 0% | 0 | 1% | 701 | 1% | 1,198 |
| Minnesota | 0% | 0 | 1% | 991 | 1% | 1,294 |
| Mississippi | 0% | 0 | 0% | 0 | 0% | 55 |
| Missouri | 1% | 1,102 | 3% | 3,451 | 3% | 2,959 |
| Montana | 0% | 0 | 1% | 564 | 1% | 633 |
| Nebraska | 0% | 0 | 0% | 427 | 1% | 840 |
| Nevada | 0% | 551 | 3% | 3,041 | 4% | 4,226 |
| New Hampshire | 0% | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 0% | 0 | 2% | 1,504 | 2% | 1,707 |
| New Mexico | 2% | 2,792 | 2% | 1,486 | 1% | 1,542 |
| New York | 0% | 331 | 1% | 940 | 1% | 647 |
| North Carolina | 0% | 0 | 0% | 0 | 2% | 2,684 |
| North Dakota | 0% | 0 | 0% | 0 | 0% | 0 |
| Ohio | 0% | 0 | 2% | 2,289 | 2% | 1,707 |
| Oklahoma | 0% | 0 | 0% | 0 | 0% | 317 |
| Oregon | 2% | 1,837 | 2% | 2,375 | 7% | 7,240 |
| Pennsylvania | 0% | 0 | 1% | 1,179 | 1% | 826 |
| Rhode Island | 0% | 0 | 0% | 0 | 0% | 165 |
| South Carolina | 0% | 0 | 0% | 0 | 0% | 124 |
| South Dakota | 0% | 0 | 0% | 0 | 0% | 0 |
| Tennessee | 0% | 0 | 0% | 137 | 0% | 427 |
| Texas | 2% | 2,498 | 7% | 6,749 | 5% | 5,189 |
| Utah | 0% | 0 | 3% | 2,682 | 3% | 3,207 |
| Vermont | 0% | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0% | 0 | 0% | 0 | 1% | 551 |
| Washington | 1% | 882 | 3% | 3,212 | 11% | 12,113 |
| West Virginia | 0% | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 0% | 0 | 1% | 649 | 1% | 578 |
| Wyoming | 0% | 0 | 0% | 0 | 0% | 138 |
| **Total** | **100%** | **120,176** | **100%** | **98,670** | **100%** | **107,379** |

### *1. Bullhead City*

Table 7-5 shows that only a limited number of states are currently capturing travelers from the Bullhead City market. According to USDOT data, approximately 60 percent of the demand associated with Bullhead City market is destined for California. Using the potential demand figures developed in previous analyses, this translates into approximately 71,753 potential annual enplanements destined for California. Of Bullhead City's remaining potential demand, approximately 30 percent of this demand is traveling to Arizona markets (or 36,005 potential annual enplanements). The remaining 10 percent of the enplanement demand is traveling to nearby states including Washington, Oregon, Colorado, and New Mexico. Other states where demand currently exists include Illinois, Missouri, and Texas. Los Angeles has 417 daily nonstop departures to different California markets, the greatest number of departures to California destinations when compared to other possible hubs (see Table 7-4). Phoenix and Las Vegas also provide a high level of service to California markets with 175 and 162 daily departures, respectively. Los Angeles serves as a hub for intra-California travel, with several regional/commuter carriers providing this service. Los Angeles is located approximately 230 miles from Bullhead City, an acceptable stage length for almost all regional/commuter aircraft and an acceptable flight time for most passengers traveling on turboprop aircraft. Service via Las Vegas to California would also be reasonable given the directionality of service to California from Bullhead City. In terms of service to markets in Arizona, Las Vegas has 49 daily nonstop departures, Phoenix has 50 departures, and Los Angeles has 51 departures.. Although Los Angeles and Las Vegas provide a high level of service to destinations in Arizona, Phoenix is a more logical choice for travelers from Bullhead City destined for other Arizona markets.

**Table 7-6** presents the hub assignment process that was used for Bullhead City. As shown, the potential enplanement estimate (120,176) was applied to the capture ratings identified for each of the state/airline hub pairs; the result is the total number of potential enplanements that could theoretically be captured if service were available to that hub. As shown in Table 7-6, the following connecting hub airports appear to be able to capture the highest level of potential demand for the Bullhead City market:

| | | | |
|---|---|---|---|
| • | Phoenix | 99,831 | 83.1% |
| • | Las Vegas | 88,047 | 73.3% |
| • | Los Angeles | 76,026 | 64.9% |

Neither Denver nor Salt Lake City captures a significant level of demand; and further review of these hubs for Bullhead City did not appear to be warranted.

It is important to note that the hub assignment process examines each hub individually and that the resultant assignment of potential passenger demand can be duplicative and/or

TABLE 7-6

Arizona Department of Transportation
Arizona Air Service Study

BULLHEAD CITY HUB ASSIGNMENT

| State | Potential Demand | Denver | | Las Vegas | | Los Angeles | | Phoenix | | Salt Lake City | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Capture Rate | Potential EPs | Capture Rate | Potential EPs | Capture Rate | Potential EPs | Capture Rate | Potential EPs | Capture Rate | Potential EPs |
| Alabama | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Alaska | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 |
| Arizona | 36,005 | 0% | 0 | 25% | 9,001 | 0% | 0 | 100% | 36,005 | 0% | 0 |
| Arkansas | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 | 0% | 0 |
| California | 71,753 | 0% | 0 | 100% | 71,753 | 100% | 71,753 | 75% | 53,815 | 0% | 0 |
| Colorado | 1,359 | 100% | 1,359 | 75% | 1,020 | 0% | 0 | 100% | 1,359 | 75% | 1,020 |
| Connecticut | 0 | 25% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| District of Columbi | 0 | 100% | 0 | 0% | 0 | 100% | 0 | 25% | 0 | 25% | 0 |
| Florida | 0 | 50% | 0 | 75% | 0 | 75% | 0 | 50% | 0 | 25% | 0 |
| Georgia | 0 | 50% | 0 | 75% | 0 | 75% | 0 | 75% | 0 | 50% | 0 |
| Hawaii | 0 | 0% | 0 | 0% | 0 | 100% | 0 | 25% | 0 | 0% | 0 |
| Idaho | 0 | 25% | 0 | 25% | 0 | 0% | 0 | 0% | 0 | 100% | 0 |
| Illinois | 992 | 100% | 992 | 50% | 496 | 75% | 744 | 75% | 744 | 50% | 496 |
| Indiana | 0 | 75% | 0 | 75% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Iowa | 0 | 75% | 0 | 0% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Kansas | 73 | 100% | 73 | 25% | 18 | 0% | 0 | 50% | 37 | 0% | 0 |
| Kentucky | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 | 0% | 0 |
| Louisiana | 0 | 25% | 0 | 25% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Maine | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Maryland | 0 | 75% | 0 | 25% | 0 | 25% | 0 | 25% | 0 | 0% | 0 |
| Massachusetts | 0 | 100% | 0 | 25% | 0 | 75% | 0 | 50% | 0 | 50% | 0 |
| Michigan | 0 | 50% | 0 | 25% | 0 | 0% | 0 | 75% | 0 | 0% | 0 |
| Minnesota | 0 | 75% | 0 | 25% | 0 | 25% | 0 | 50% | 0 | 50% | 0 |
| Mississippi | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Missouri | 1,102 | 100% | 1,102 | 50% | 551 | 25% | 276 | 100% | 1,102 | 50% | 551 |
| Montana | 0 | 50% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 100% | 0 |
| Nebraska | 0 | 100% | 0 | 25% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Nevada | 551 | 0% | 0 | 75% | 413 | 100% | 551 | 100% | 551 | 50% | 276 |
| New Hampshire | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Mexico | 2,792 | 50% | 1,396 | 50% | 1,396 | 0% | 0 | 100% | 2,792 | 0% | 0 |
| New York | 331 | 75% | 248 | 50% | 165 | 100% | 331 | 75% | 248 | 25% | 83 |
| North Carolina | 0 | 25% | 0 | 25% | 0 | 50% | 0 | 25% | 0 | 0% | 0 |
| North Dakota | 0 | 50% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Ohio | 0 | 75% | 0 | 25% | 0 | 25% | 0 | 75% | 0 | 25% | 0 |
| Oklahoma | 0 | 75% | 0 | 0% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Oregon | 1,837 | 0% | 0 | 50% | 918 | 100% | 1,837 | 25% | 459 | 50% | 918 |
| Pennsylvania | 0 | 75% | 0 | 50% | 0 | 75% | 0 | 50% | 0 | 0% | 0 |
| Rhode Island | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0 | 75% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 |
| Tennessee | 0 | 25% | 0 | 25% | 0 | 50% | 0 | 25% | 0 | 0% | 0 |
| Texas | 2,498 | 75% | 1,874 | 75% | 1,874 | 75% | 1,874 | 100% | 2,498 | 25% | 625 |
| Utah | 0 | 50% | 0 | 75% | 0 | 25% | 0 | 50% | 0 | 75% | 0 |
| Vermont | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Washington | 882 | 25% | 220 | 50% | 441 | 75% | 661 | 25% | 220 | 50% | 441 |
| West Virginia | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 0 | 50% | 0 | 25% | 0 | 25% | 0 | 25% | 0 | 50% | 0 |
| Wyoming | 0 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| **Total EPs by Hub** | 120,176 | | 7,265 | | 88,047 | | 78,026 | | 99,831 | | 4,409 |
| **Percent of Total** | 100.0% | | 6.0% | | 73.3% | | 64.9% | | 83.1% | | 3.7% |

overlapping. For example, for Bullhead City travelers destined to Missouri, service to Denver and Phoenix could serve a majority of the same travelers because both hubs have similar service to Missouri. The total number of potential enplanements captured by each airline connecting hub is, for the most part, not additive due to possible double counting. When the ability of a particular market to serve new or improved service is analyzed, it is important to review the distribution of demand by state to determine where such overlaps in demand assignments may exist.

The level of service that can be supported from Bullhead City to the three hubs that captured the highest levels of demand, Phoenix, Las Vegas, and/or Los Angeles, will be analyzed in detail in the route analysis section of this chapter.

### *2. Flagstaff*

Air travelers associated with the Flagstaff market most commonly fly to states in the Southwest (see Table 7-5). Approximately 32 percent of the travelers are destined for California, 17 percent of the travelers are destined for other Arizona markets, and 7 percent are destined for locations in Texas. The remaining 56 percent of air travelers from the Flagstaff area travel to other states throughout the U.S., with no single state capturing more than 5 percent of the remaining demand. Since the largest percentage of Flagstaff travelers are destined for California and because Los Angeles has the largest number of departures to other California markets at 417 departures, Los Angeles should be considered as a possible hub. However, the stage length between Flagstaff and Los Angeles is 394 miles, the longest stage length of the possible hubs considered. Of the other possible hubs considered, Phoenix has the next highest level of departures to California, followed by Las Vegas. Both of these hubs are closer to Flagstaff than Los Angeles. The stage length from Flagstaff to Phoenix is 116 miles, while the stage length to Las Vegas is 214 miles. All three of these hubs are within range for regional/commuter aircraft; Los Angeles, however, is at the outer limit of this range. Following California, the next highest level of demand is for travel within Arizona at 17 percent. Los Angeles also has the largest number of departures to Arizona followed closely by Phoenix. It is important to note that aside from service to Yuma, other service to Arizona from Los Angeles is restricted to flights to Phoenix and Tucson. It is unlikely that passengers would utilize the Los Angeles hub to fly from Flagstaff to other Arizona markets. Therefore, existing service to Phoenix is a logical choice to serve demand for Arizona destinations.

**Table 7-7** presents the hub assignment process that was used for Flagstaff. As shown, the potential enplanement estimate (98,670) was applied to the capture ratings identified for each of the state/airline hub pairs. The results of the application of the potential enplanements to the capture ratings is the total number of potential enplanements that could theoretically be captured if service were available to that hub. As shown in Table 7-7, the following

TABLE 7-7

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FLAGSTAFF HUB ASSIGNMENT

| State | Potential Demand | Denver Capture Rate | Denver Potential EPs | Las Vegas Capture Rate | Las Vegas Potential EPs | Los Angeles Capture Rate | Los Angeles Potential EPs | Phoenix Capture Rate | Phoenix Potential EPs | Salt Lake City Capture Rate | Salt Lake City Potential EPs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Alaska | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 |
| Arizona | 17,257 | 0% | 0 | 0% | 0 | 0% | 0 | 100% | 17,257 | 0% | 0 |
| Arkansas | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 | 0% | 0 |
| California | 31,591 | 0% | 0 | 100% | 31,591 | 100% | 31,591 | 100% | 31,591 | 25% | 7,898 |
| Colorado | 5,399 | 100% | 5,399 | 50% | 2,700 | 25% | 1,350 | 75% | 4,049 | 50% | 2,700 |
| Connecticut | 17 | 25% | 4 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| District of Columbi | 1,418 | 50% | 709 | 0% | 0 | 50% | 709 | 25% | 355 | 25% | 355 |
| Florida | 1,811 | 50% | 906 | 25% | 453 | 50% | 906 | 0% | 0 | 0% | 0 |
| Georgia | 1,367 | 50% | 683 | 25% | 342 | 25% | 342 | 50% | 683 | 25% | 342 |
| Hawaii | 0 | 0% | 0 | 0% | 0 | 100% | 0 | 25% | 0 | 0% | 0 |
| Idaho | 188 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 100% | 188 |
| Illinois | 1,794 | 100% | 1,794 | 25% | 449 | 75% | 1,346 | 50% | 897 | 25% | 449 |
| Indiana | 1,469 | 50% | 735 | 50% | 735 | 0% | 0 | 25% | 367 | 0% | 0 |
| Iowa | 0 | 75% | 0 | 0% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Kansas | 290 | 75% | 218 | 0% | 0 | 0% | 0 | 25% | 73 | 0% | 0 |
| Kentucky | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 | 0% | 0 |
| Louisiana | 359 | 50% | 179 | 0% | 0 | 0% | 0 | 25% | 90 | 0% | 0 |
| Maine | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Maryland | 786 | 75% | 589 | 0% | 0 | 25% | 196 | 25% | 196 | 0% | 0 |
| Massachusetts | 2,546 | 75% | 1,909 | 0% | 0 | 75% | 1,909 | 25% | 636 | 25% | 636 |
| Michigan | 701 | 50% | 350 | 25% | 175 | 0% | 0 | 50% | 350 | 0% | 0 |
| Minnesota | 991 | 75% | 743 | 25% | 248 | 25% | 248 | 50% | 495 | 50% | 495 |
| Mississippi | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Missouri | 3,451 | 100% | 3,451 | 75% | 2,588 | 25% | 863 | 100% | 3,451 | 75% | 2,588 |
| Montana | 564 | 50% | 282 | 0% | 0 | 0% | 0 | 0% | 0 | 100% | 564 |
| Nebraska | 427 | 100% | 427 | 25% | 107 | 0% | 0 | 50% | 214 | 25% | 107 |
| Nevada | 3,041 | 0% | 0 | 50% | 1,521 | 75% | 2,281 | 75% | 2,281 | 50% | 1,521 |
| New Hampshire | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 1,504 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Mexico | 1,486 | 50% | 743 | 25% | 372 | 0% | 0 | 100% | 1,486 | 0% | 0 |
| New York | 940 | 100% | 940 | 50% | 470 | 50% | 470 | 75% | 705 | 25% | 235 |
| North Carolina | 0 | 25% | 0 | 0% | 0 | 25% | 0 | 0% | 0 | 0% | 0 |
| North Dakota | 0 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Ohio | 2,289 | 100% | 2,289 | 75% | 1,717 | 50% | 1,145 | 100% | 2,289 | 50% | 1,145 |
| Oklahoma | 0 | 50% | 0 | 0% | 0 | 0% | 0 | 50% | 0 | 0% | 0 |
| Oregon | 2,375 | 0% | 0 | 50% | 1,187 | 75% | 1,781 | 50% | 1,187 | 75% | 1,781 |
| Pennsylvania | 1,179 | 75% | 884 | 25% | 295 | 25% | 295 | 50% | 589 | 0% | 0 |
| Rhode Island | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 |
| Tennessee | 137 | 50% | 68 | 25% | 34 | 50% | 68 | 50% | 68 | 0% | 0 |
| Texas | 6,749 | 75% | 5,062 | 50% | 3,374 | 0% | 0 | 100% | 6,749 | 0% | 0 |
| Utah | 2,682 | 25% | 671 | 75% | 2,012 | 25% | 671 | 50% | 1,341 | 100% | 2,682 |
| Vermont | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Washington | 3,212 | 0% | 0 | 50% | 1,606 | 75% | 2,409 | 50% | 1,606 | 75% | 2,409 |
| West Virginia | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 649 | 75% | 487 | 0% | 0 | 0% | 0 | 25% | 162 | 75% | 487 |
| Wyoming | 0 | 100% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| **Total EPs by Hub** | 98,670 | | 29,524 | | 51,975 | | 48,579 | | 79,171 | | 26,581 |
| **Percent of Total** | 100.0% | | 29.9% | | 52.7% | | 49.2% | | 80.2% | | 26.9% |

connecting hub airports appear to be able to capture the highest level of potential demand for the Flagstaff market:

| | | | |
|---|---|---|---|
| • | Phoenix | 79,171 | 80.2% |
| • | Las Vegas | 51,975 | 52.7% |
| • | Los Angeles | 48,579 | 49.2% |

Denver and Salt Lake City capture less demand than the three hubs noted above, although the level of demand captured by each of the hubs is still substantive. Service that can be supported from Flagstaff to the various hubs will be analyzed in detail in the route analysis section of this chapter.

### *3. Yuma*

As shown on Table 7-5, over half of the Yuma market is currently traveling to western states. Arizona accounts for 21 percent of the air travel demand, California accounts for 13 percent, Washington accounts for 11 percent, and Oregon accounts for approximately 7 percent of the Yuma market's demand. Los Angeles and Phoenix have the highest number of departures to Arizona markets with 51 and 50 departures, respectively. It is unlikely, however, passengers would fly from Yuma to Los Angeles to then fly back to Arizona. Therefore, existing service to Phoenix will likely continue to serve demand to Arizona cities. Los Angeles is a logical hub for the 31 percent of the Yuma market traveling to California and beyond. Of all of the hubs considered, Los Angeles has the highest number of departures to destinations in California, Washington, and Oregon. Los Angeles is also in the general direction of these states, making it an acceptable choice for Yuma air travelers. The stage length from Yuma to Los Angeles is 240 miles, as compared to 159 miles from Yuma to Phoenix.

**Table 7-8** presents the hub assignment process that was used for Yuma. As shown, the potential enplanement estimate (107,379) was applied to the capture ratings identified for each of the state/airline hub pairs; the result is the total number of potential enplanements that could theoretically be captured if service were available to that hub. As shown in Table 7-8, the following connecting hub airports appear to be able to capture the highest level of potential demand for the Yuma market:

| | | | |
|---|---|---|---|
| • | Phoenix | 74,946 | 69.8% |
| • | Los Angeles | 56,208 | 54.2% |
| • | Las Vegas | 46,832 | 43.6% |

Denver and Salt Lake City capture less demand than these three hubs, although the level of demand captured by each of these hubs from Yuma demand is still notable. It is unlikely that service to three airline hubs could be supported in Yuma based on the total potential demand

TABLE 7-8

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YUMA HUB ASSIGNMENT

| State | Potential Demand | Denver | | Las Vegas | | Los Angeles | | Phoenix | | Salt Lake City | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Capture Rate | Potential EPs | Capture Rate | Potential EPs | Capture Rate | Potential EPs | Capture Rate | Potential EPs | Capture Rate | Potential EPs |
| Alabama | 468 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Alaska | 330 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 83 |
| Arizona | 22,492 | 0% | 0 | 0% | 0 | 0% | 0 | 100% | 22,492 | 0% | 0 |
| Arkansas | 165 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 41 | 0% | 0 |
| California | 13,751 | 0% | 0 | 100% | 13,751 | 100% | 13,751 | 75% | 10,313 | 0% | 0 |
| Colorado | 4,542 | 100% | 4,542 | 75% | 3,407 | 75% | 3,407 | 100% | 4,542 | 50% | 2,271 |
| Connecticut | 69 | 25% | 17 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| District of Columbi | 2,423 | 50% | 1,211 | 0% | 0 | 100% | 2,423 | 25% | 606 | 25% | 606 |
| Florida | 2,216 | 0% | 0 | 25% | 554 | 75% | 1,662 | 25% | 554 | 0% | 0 |
| Georgia | 1,844 | 50% | 922 | 50% | 922 | 75% | 1,383 | 75% | 1,383 | 25% | 461 |
| Hawaii | 785 | 0% | 0 | 0% | 0 | 100% | 785 | 25% | 196 | 0% | 0 |
| Idaho | 1,432 | 25% | 358 | 25% | 358 | 0% | 0 | 0% | 0 | 100% | 1,432 |
| Illinois | 1,817 | 100% | 1,817 | 75% | 1,363 | 100% | 1,817 | 100% | 1,817 | 50% | 908 |
| Indiana | 1,046 | 50% | 523 | 50% | 523 | 25% | 262 | 50% | 523 | 0% | 0 |
| Iowa | 55 | 50% | 28 | 0% | 0 | 0% | 0 | 50% | 28 | 0% | 0 |
| Kansas | 358 | 75% | 268 | 25% | 89 | 0% | 0 | 50% | 179 | 0% | 0 |
| Kentucky | 138 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 34 | 0% | 0 |
| Louisiana | 248 | 25% | 62 | 25% | 62 | 0% | 0 | 50% | 124 | 0% | 0 |
| Maine | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Maryland | 1,060 | 75% | 795 | 0% | 0 | 25% | 265 | 50% | 530 | 0% | 0 |
| Massachusetts | 1,776 | 75% | 1,332 | 0% | 0 | 75% | 1,332 | 50% | 888 | 25% | 444 |
| Michigan | 1,198 | 50% | 599 | 50% | 599 | 25% | 299 | 75% | 898 | 0% | 0 |
| Minnesota | 1,294 | 100% | 1,294 | 75% | 970 | 50% | 647 | 75% | 970 | 75% | 970 |
| Mississippi | 55 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Missouri | 2,959 | 100% | 2,959 | 75% | 2,220 | 50% | 1,480 | 100% | 2,959 | 50% | 1,480 |
| Montana | 633 | 50% | 317 | 0% | 0 | 0% | 0 | 0% | 0 | 100% | 633 |
| Nebraska | 840 | 100% | 840 | 50% | 420 | 25% | 210 | 50% | 420 | 50% | 420 |
| Nevada | 4,226 | 0% | 0 | 75% | 3,169 | 100% | 4,226 | 100% | 4,226 | 50% | 2,113 |
| New Hampshire | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 1,707 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Mexico | 1,542 | 0% | 0 | 25% | 385 | 25% | 385 | 100% | 1,542 | 0% | 0 |
| New York | 647 | 75% | 485 | 50% | 323 | 100% | 647 | 75% | 485 | 25% | 162 |
| North Carolina | 2,684 | 25% | 671 | 25% | 671 | 50% | 1,342 | 25% | 671 | 0% | 0 |
| North Dakota | 0 | 75% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Ohio | 1,707 | 75% | 1,280 | 50% | 853 | 50% | 853 | 75% | 1,280 | 50% | 853 |
| Oklahoma | 317 | 50% | 158 | 25% | 79 | 0% | 0 | 50% | 158 | 25% | 79 |
| Oregon | 7,240 | 25% | 1,810 | 50% | 3,620 | 75% | 5,430 | 50% | 3,620 | 50% | 3,620 |
| Pennsylvania | 826 | 75% | 619 | 50% | 413 | 50% | 413 | 50% | 413 | 25% | 206 |
| Rhode Island | 165 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 124 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0 | 75% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 25% | 0 |
| Tennessee | 427 | 50% | 213 | 25% | 107 | 50% | 213 | 25% | 107 | 0% | 0 |
| Texas | 5,189 | 25% | 1,297 | 50% | 2,595 | 25% | 1,297 | 100% | 5,189 | 0% | 0 |
| Utah | 3,207 | 0% | 0 | 100% | 3,207 | 50% | 1,604 | 50% | 1,604 | 100% | 3,207 |
| Vermont | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Virginia | 551 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Washington | 12,113 | 25% | 3,028 | 50% | 6,057 | 100% | 12,113 | 50% | 6,057 | 75% | 9,085 |
| West Virginia | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 578 | 50% | 289 | 25% | 145 | 0% | 0 | 25% | 145 | 75% | 434 |
| Wyoming | 138 | 100% | 138 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| **Total EPs by Hub** | 107,379 | | 27,874 | | 46,862 | | 58,246 | | 74,994 | | 29,467 |
| **Percent of Total** | 100.0% | | 26.0% | | 43.6% | | 54.2% | | 69.8% | | 27.4% |

estimate developed as part of this study. Service to more than two hubs would likely splinter demand preventing the carriers from serving the market with larger aircraft at higher flight frequencies. Service that can be supported from Yuma to the various hubs will be analyzed in detail in the route analysis section of this chapter.

## B. Intermediate Communities

The intermediate communities include Lake Havasu City, Page, Prescott, and Sierra Vista. It is important to note that the assigned category for each community is based on its level of potential enplanements developed in the previous chapter. All intermediate communities currently have regional/commuter service to Phoenix. Based on the level of potential enplanements at the intermediate communities, it was determined that these markets most likely cannot support profitable commercial passenger service to more than one hub. The hub best suited to meet the air travel needs of these communities is Phoenix. Although all of these communities already have service to Phoenix, Las Vegas may be an alternative hub choice for serving some of these markets. As a result, Phoenix and Las Vegas were both analyzed for the intermediate communities. Other hubs such as Los Angeles were not evaluated due to insufficient levels of demand. Although Las Vegas has a high level of departures and serves a number of destinations, it is not considered a "true" airline connecting hub. Las Vegas is not dominated by one airline, which makes code-sharing by smaller regional/commuter carriers more difficult. For Sierra Vista, service to Las Vegas was not analyzed since the stage length is 426 miles which exceeds the range of most turboprop aircraft. Service to Tucson was initially reviewed as an option for Sierra Vista; however, Tucson offers less than 60 daily flights and is not served by a regional/commuter carrier that could logically serve Sierra Vista. It was assumed that due to the proximity of Tucson, Sierra Vista travelers who are traveling just to Tucson would not be willing to pay the air fare that would need to be charged on a Sierra Vista-Tucson flight. These travelers would drive versus fly to Tucson. This community is not large enough to support the newer regional/commuter jet aircraft. It is considered unlikely that a Sierra Vista passenger would travel to Las Vegas, bypassing Phoenix, to make an airline connection.

Similar to the large community markets, the potential passenger demand to each state from the intermediate community markets was reviewed prior to analyzing any candidate connecting hubs. **Table 7-9** presents the potential demand for each of the markets, allocated by state. This allocation of potential demand by state shows where passengers are traveling to and from for each airport included in this category. Using potential demand by state, the best option(s) to serve this demand via the candidate hubs was identified.

TABLE 7-9

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DEMAND ALLOCATION BY STATE

| State | Lake Havasu | | Page | | Prescott | | Sierra Vista | |
|---|---|---|---|---|---|---|---|---|
| | Percent of Potential Demand | Total Potential Demand by State | Percent of Potential Demand | Total Potential Demand by State | Percent of Potential Demand | Total Potential Demand by State | Percent of Potential Demand | Total Potential Demand by State |
| Alabama | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Alaska | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Arizona | 45% | 11,104 | 10% | 3,582 | 18% | 3,450 | 33% | 9,052 |
| Arkansas | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| California | 18% | 4,429 | 40% | 13,731 | 46% | 8,781 | 18% | 4,972 |
| Colorado | 5% | 1,257 | 22% | 7,761 | 5% | 893 | 6% | 1,572 |
| Connecticut | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| District of Columbia | 0% | 0 | 0% | 0 | 0% | 0 | 2% | 446 |
| Florida | 1% | 247 | 0% | 0 | 0% | 0 | 1% | 255 |
| Georgia | 0% | 0 | 10% | 3,582 | 1% | 265 | 5% | 1,487 |
| Hawaii | 0% | 0 | 0% | 0 | 0% | 0 | 2% | 616 |
| Idaho | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Illinois | 3% | 618 | 3% | 1,194 | 2% | 338 | 0% | 0 |
| Indiana | 2% | 371 | 0% | 0 | 0% | 0 | 0% | 0 |
| Iowa | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Kansas | 0% | 62 | 0% | 0 | 0% | 0 | 0% | 0 |
| Kentucky | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Louisiana | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Maine | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Maryland | 0% | 0 | 0% | 0 | 1% | 241 | 2% | 446 |
| Massachusetts | 1% | 185 | 0% | 0 | 1% | 96 | 2% | 467 |
| Michigan | 4% | 968 | 0% | 0 | 0% | 0 | 0% | 0 |
| Minnesota | 5% | 1,257 | 0% | 0 | 2% | 289 | 1% | 361 |
| Mississippi | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Missouri | 2% | 536 | 0% | 0 | 5% | 965 | 4% | 1,105 |
| Montana | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Nebraska | 1% | 144 | 0% | 0 | 0% | 0 | 0% | 0 |
| Nevada | 0% | 0 | 0% | 0 | 3% | 507 | 3% | 786 |
| New Hampshire | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 1% | 268 | 0% | 0 | 0% | 48 | 2% | 659 |
| New Mexico | 1% | 206 | 0% | 0 | 2% | 289 | 1% | 149 |
| New York | 1% | 144 | 0% | 0 | 1% | 217 | 0% | 0 |
| North Carolina | 0% | 0 | 0% | 0 | 0% | 0 | 1% | 340 |
| North Dakota | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Ohio | 0% | 0 | 0% | 0 | 1% | 121 | 1% | 319 |
| Oklahoma | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Oregon | 2% | 371 | 0% | 0 | 3% | 555 | 1% | 191 |
| Pennsylvania | 0% | 0 | 0% | 0 | 0% | 0 | 1% | 234 |
| Rhode Island | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Tennessee | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Texas | 4% | 927 | 3% | 1,194 | 6% | 1,134 | 9% | 2,359 |
| Utah | 2% | 494 | 0% | 0 | 2% | 434 | 3% | 871 |
| Vermont | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Washington | 3% | 659 | 10% | 3,582 | 3% | 507 | 2% | 616 |
| West Virginia | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 2% | 371 | 0% | 0 | 0% | 0 | 0% | 0 |
| Wyoming | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 |
| **Total** | **100%** | **24,619** | **100%** | **34,626** | **100%** | **19,130** | **100%** | **27,305** |

### *1. Lake Havasu City*

**Table 7-10** presents the hub assignment for Lake Havasu City. The two hubs reviewed for this market were Phoenix and Las Vegas. As shown on Table 7-10, approximately 45 percent of the demand (11,104 annual enplanements) from Lake Havasu City is currently traveling to other Arizona destinations. California is attracting the second largest segment of demand from Lake Havasu City at 18 percent (4,429 enplanements). Currently, service is provided from Lake Havasu City to Phoenix on America West Express. From a pure destination standpoint, airline service to Phoenix can meet the majority of the needs of the Lake Havasu City travelers who are destined for Phoenix and other Arizona cities. The stage length from Lake Havasu City to Phoenix is 145 miles. The hub assignment process revealed that Phoenix is likely to capture nearly 90 percent of the demand from Lake Havasu City or 22,054 enplanements.

In addition to examining service to Phoenix, Las Vegas was also reviewed as an option for travelers from Lake Havasu City. The stage length from Lake Havasu City to Las Vegas is 128 miles, slightly closer than Phoenix. Las Vegas service would also likely capture a high percentage of travelers (83.6 percent or 20,571 enplanements). Again, it is important to note that the hub assignment process examines each hub individually and that the resultant demand assignment can be duplicative and/or overlapping. The total number of potential enplanements captured by each airline connecting hub for this analysis are, for the most part, not additive due to the overlaps. For example, for Lake Havasu City travelers destined to California, service to Phoenix and Las Vegas would serve a majority of the same travelers because both hubs have similar service to California. The route analysis will examine the level of scheduled commercial airline service that may be able to be supported to both hubs using the potential demand estimate for the Lake Havasu City market.

### *2. Page*

**Table 7-11** presents the hub assignment for Page. The two hubs reviewed for this market were Phoenix and Las Vegas. Unlike the other markets examined thus far, the highest demand for Page air travelers is for destinations in California. Based on USDOT records, approximately 40 percent of the existing demand from Page is destined for California cities, while 22 percent of this market's demand is destined for various cities in Colorado. Other states that capture a high percentage of passenger demand associated with this market included Arizona, Georgia, Washington, Illinois, and Texas. When this study started, service was provided from Page to Phoenix on Scenic Airlines. Near the conclusion of the study, however, Scenic Airlines service was terminated, and Sunrise Airlines became the market's scheduled carrier.

TABLE 7-10

Arizona Department of Transportation
Arizona Air Service Study

LAKE HAVASU CITY HUB ASSIGNMENT

| State | Potential Demand | Las Vegas Capture Rate | Las Vegas Potential EPs | Phoenix Capture Rate | Phoenix Potential EPs |
|---|---|---|---|---|---|
| Alabama | 0 | 0% | 0 | 0% | 0 |
| Alaska | 0 | 0% | 0 | 0% | 0 |
| Arizona | 11,104 | 100% | 11,104 | 100% | 11,104 |
| Arkansas | 0 | 0% | 0 | 50% | 0 |
| California | 4,429 | 100% | 4,429 | 100% | 4,429 |
| Colorado | 1,257 | 50% | 628 | 100% | 1,257 |
| Connecticut | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0 | 0% | 0 | 0% | 0 |
| District of Columbia | 0 | 0% | 0 | 50% | 0 |
| Florida | 247 | 50% | 124 | 25% | 62 |
| Georgia | 0 | 50% | 0 | 75% | 0 |
| Hawaii | 0 | 0% | 0 | 25% | 0 |
| Idaho | 0 | 50% | 0 | 0% | 0 |
| Illinois | 618 | 75% | 464 | 75% | 464 |
| Indiana | 371 | 50% | 185 | 25% | 93 |
| Iowa | 0 | 0% | 0 | 50% | 0 |
| Kansas | 62 | 25% | 15 | 25% | 15 |
| Kentucky | 0 | 0% | 0 | 25% | 0 |
| Louisiana | 0 | 25% | 0 | 25% | 0 |
| Maine | 0 | 0% | 0 | 0% | 0 |
| Maryland | 0 | 25% | 0 | 25% | 0 |
| Massachusetts | 185 | 50% | 93 | 50% | 93 |
| Michigan | 968 | 50% | 484 | 75% | 726 |
| Minnesota | 1,257 | 50% | 628 | 75% | 943 |
| Mississippi | 0 | 0% | 0 | 0% | 0 |
| Missouri | 536 | 75% | 402 | 100% | 536 |
| Montana | 0 | 0% | 0 | 0% | 0 |
| Nebraska | 144 | 25% | 36 | 50% | 72 |
| Nevada | 0 | 75% | 0 | 75% | 0 |
| New Hampshire | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 268 | 0% | 0 | 0% | 0 |
| New Mexico | 206 | 50% | 103 | 100% | 206 |
| New York | 144 | 75% | 108 | 75% | 108 |
| North Carolina | 0 | 25% | 0 | 25% | 0 |
| North Dakota | 0 | 0% | 0 | 0% | 0 |
| Ohio | 0 | 50% | 0 | 50% | 0 |
| Oklahoma | 0 | 25% | 0 | 50% | 0 |
| Oregon | 371 | 50% | 185 | 50% | 185 |
| Pennsylvania | 0 | 50% | 0 | 50% | 0 |
| Rhode Island | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0 | 0% | 0 | 0% | 0 |
| Tennessee | 0 | 50% | 0 | 25% | 0 |
| Texas | 927 | 75% | 695 | 100% | 927 |
| Utah | 494 | 75% | 371 | 50% | 247 |
| Vermont | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0 | 0% | 0 | 0% | 0 |
| Washington | 659 | 50% | 330 | 75% | 494 |
| West Virginia | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 371 | 50% | 185 | 25% | 93 |
| Wyoming | 0 | 0% | 0 | 0% | 0 |
| **Total EPs by Hub** | 24,619 | | 20,571 | | 22,054 |
| **Percent of Total** | 100.0% | | 83.6% | | 89.6% |

TABLE 7-11

Arizona Department of Transportation
Arizona Air Service Study

PAGE HUB ASSIGNMENT

| State | Potential Demand | Las Vegas Capture Rate | Las Vegas Potential EPs | Phoenix Capture Rate | Phoenix Potential EPs |
|---|---|---|---|---|---|
| Alabama | 0 | 0% | 0 | 0% | 0 |
| Alaska | 0 | 0% | 0 | 0% | 0 |
| Arizona | 3,582 | 25% | 896 | 100% | 3,582 |
| Arkansas | 0 | 0% | 0 | 50% | 0 |
| California | 13,731 | 100% | 13,731 | 100% | 13,731 |
| Colorado | 7,761 | 50% | 3,881 | 100% | 7,761 |
| Connecticut | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0 | 0% | 0 | 0% | 0 |
| District of Columbi | 0 | 0% | 0 | 50% | 0 |
| Florida | 0 | 50% | 0 | 25% | 0 |
| Georgia | 3,582 | 50% | 1,791 | 75% | 2,687 |
| Hawaii | 0 | 0% | 0 | 25% | 0 |
| Idaho | 0 | 25% | 0 | 0% | 0 |
| Illinois | 1,194 | 75% | 896 | 75% | 896 |
| Indiana | 0 | 50% | 0 | 25% | 0 |
| Iowa | 0 | 0% | 0 | 50% | 0 |
| Kansas | 0 | 25% | 0 | 25% | 0 |
| Kentucky | 0 | 0% | 0 | 25% | 0 |
| Louisiana | 0 | 25% | 0 | 25% | 0 |
| Maine | 0 | 0% | 0 | 0% | 0 |
| Maryland | 0 | 25% | 0 | 25% | 0 |
| Massachusetts | 0 | 25% | 0 | 25% | 0 |
| Michigan | 0 | 25% | 0 | 50% | 0 |
| Minnesota | 0 | 50% | 0 | 75% | 0 |
| Mississippi | 0 | 0% | 0 | 0% | 0 |
| Missouri | 0 | 50% | 0 | 100% | 0 |
| Montana | 0 | 0% | 0 | 0% | 0 |
| Nebraska | 0 | 25% | 0 | 50% | 0 |
| Nevada | 0 | 75% | 0 | 75% | 0 |
| New Hampshire | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 0 | 0% | 0 | 0% | 0 |
| New Mexico | 0 | 25% | 0 | 100% | 0 |
| New York | 0 | 50% | 0 | 75% | 0 |
| North Carolina | 0 | 25% | 0 | 25% | 0 |
| North Dakota | 0 | 0% | 0 | 0% | 0 |
| Ohio | 0 | 50% | 0 | 50% | 0 |
| Oklahoma | 0 | 25% | 0 | 50% | 0 |
| Oregon | 0 | 50% | 0 | 50% | 0 |
| Pennsylvania | 0 | 50% | 0 | 50% | 0 |
| Rhode Island | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0 | 0% | 0 | 0% | 0 |
| Tennessee | 0 | 25% | 0 | 25% | 0 |
| Texas | 1,194 | 75% | 896 | 100% | 1,194 |
| Utah | 0 | 75% | 0 | 50% | 0 |
| Vermont | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0 | 0% | 0 | 0% | 0 |
| Washington | 3,582 | 50% | 1,791 | 75% | 2,687 |
| West Virginia | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 0 | 25% | 0 | 25% | 0 |
| Wyoming | 0 | 0% | 0 | 0% | 0 |
| **Total EPs by Hub** | 34,626 | | 23,880 | | 32,537 |
| **Percent of Total** | 100.0% | | 69.0% | | 94.0% |

Page is located almost equidistant from Las Vegas and Phoenix with a stage length to Las Vegas of 215 miles and 234 miles to Phoenix. It is also important to consider the number of departures that Las Vegas and Phoenix each have to top destination states indicated above. Las Vegas has 162 departures to California, while Phoenix has slightly more with 175 departures. Phoenix has 44 daily departures to Colorado, significantly higher than the 17 daily departures from Las Vegas. Phoenix also has more departures to destinations in Arizona, Washington, and Georgia. As shown in the hub assignment process on Table 7-11, commercial airline service available at Phoenix enables this hub to capture a higher proportion of Page's potential demand than Las Vegas (94 percent for Phoenix versus 69 percent for Las Vegas). As previously noted, due to possible overlaps in the assignment of potential demand, these hub capture rates are not additive. It appears that service to Phoenix would better serve the Page market; however, Las Vegas will be examined further in the route analysis to determine if a sufficient level of demand exists to support supplemental service to second hub.

### *3. Prescott*

**Table 7-12** presents the hub assignment for Prescott. The two hubs reviewed for this market were also Phoenix and Las Vegas. As shown on Table 7-12, approximately 46 percent of the passenger demand in the Page market is destined for locations in California, 18 percent to Arizona cities, and 6 percent to Texas markets. Currently, service is provided from Prescott to Phoenix on America West Express. From a pure destination standpoint, airline service to Phoenix can meet the majority of the needs of Prescott travelers who are destined for Phoenix and other Arizona cities. The stage length from Prescott to Phoenix is 74 miles, while it is 193 miles to Las Vegas. The hub assignment process revealed that Phoenix is likely to capture over 92 percent of the potential demand from Prescott or 17,671 enplanements.

In addition to examining service at Phoenix, Las Vegas was also reviewed as a service option for travelers from Prescott. The stage length from Prescott to Las Vegas is 193 miles, more than double the distance to Phoenix. Using the hub assignment process, Las Vegas captures almost 71 percent of the potential demand from Prescott. Again, it is important to note that the hub assignment process examines each hub individually and that the resultant demand levels assigned to each hub can be duplicative and/or overlapping. The total number of potential enplanements captured by each airline connecting hub are, for the most part, not additive. It appears that service to Phoenix would better serve the Prescott market, however, Las Vegas will be examined further in the route analysis to determine if a sufficient level of demand exists to support minimal service to a second hub.

TABLE 7-12

Arizona Department of Transportation
Arizona Air Service Study

PRESCOTT HUB ASSIGNMENT

| State | Potential Demand | Las Vegas Capture Rate | Las Vegas Potential EPs | Phoenix Capture Rate | Phoenix Potential EPs |
|---|---|---|---|---|---|
| Alabama | 0 | 0% | 0 | 0% | 0 |
| Alaska | 0 | 0% | 0 | 0% | 0 |
| Arizona | 3,450 | 25% | 862 | 100% | 3,450 |
| Arkansas | 0 | 0% | 0 | 50% | 0 |
| California | 8,781 | 100% | 8,781 | 100% | 8,781 |
| Colorado | 893 | 50% | 446 | 100% | 893 |
| Connecticut | 0 | 0% | 0 | 0% | 0 |
| Delaware | 0 | 0% | 0 | 0% | 0 |
| District of Columbi | 0 | 0% | 0 | 50% | 0 |
| Florida | 0 | 50% | 0 | 25% | 0 |
| Georgia | 265 | 50% | 133 | 75% | 199 |
| Hawaii | 0 | 0% | 0 | 25% | 0 |
| Idaho | 0 | 50% | 0 | 0% | 0 |
| Illinois | 338 | 75% | 253 | 75% | 253 |
| Indiana | 0 | 50% | 0 | 25% | 0 |
| Iowa | 0 | 0% | 0 | 50% | 0 |
| Kansas | 0 | 25% | 0 | 25% | 0 |
| Kentucky | 0 | 0% | 0 | 25% | 0 |
| Louisiana | 0 | 25% | 0 | 25% | 0 |
| Maine | 0 | 0% | 0 | 0% | 0 |
| Maryland | 241 | 25% | 60 | 25% | 60 |
| Massachusetts | 96 | 25% | 24 | 25% | 24 |
| Michigan | 0 | 50% | 0 | 50% | 0 |
| Minnesota | 289 | 50% | 145 | 50% | 145 |
| Mississippi | 0 | 0% | 0 | 0% | 0 |
| Missouri | 965 | 50% | 482 | 100% | 965 |
| Montana | 0 | 0% | 0 | 0% | 0 |
| Nebraska | 0 | 50% | 0 | 50% | 0 |
| Nevada | 507 | 75% | 380 | 75% | 380 |
| New Hampshire | 0 | 0% | 0 | 0% | 0 |
| New Jersey | 48 | 0% | 0 | 0% | 0 |
| New Mexico | 289 | 50% | 145 | 100% | 289 |
| New York | 217 | 75% | 163 | 75% | 163 |
| North Carolina | 0 | 25% | 0 | 25% | 0 |
| North Dakota | 0 | 0% | 0 | 0% | 0 |
| Ohio | 121 | 50% | 60 | 50% | 60 |
| Oklahoma | 0 | 25% | 0 | 50% | 0 |
| Oregon | 555 | 50% | 277 | 50% | 277 |
| Pennsylvania | 0 | 50% | 0 | 50% | 0 |
| Rhode Island | 0 | 0% | 0 | 0% | 0 |
| South Carolina | 0 | 0% | 0 | 0% | 0 |
| South Dakota | 0 | 0% | 0 | 0% | 0 |
| Tennessee | 0 | 25% | 0 | 25% | 0 |
| Texas | 1,134 | 75% | 850 | 100% | 1,134 |
| Utah | 434 | 50% | 217 | 50% | 217 |
| Vermont | 0 | 0% | 0 | 0% | 0 |
| Virginia | 0 | 0% | 0 | 0% | 0 |
| Washington | 507 | 50% | 253 | 75% | 380 |
| West Virginia | 0 | 0% | 0 | 0% | 0 |
| Wisconsin | 0 | 25% | 0 | 25% | 0 |
| Wyoming | 0 | 0% | 0 | 0% | 0 |
| **Total EPs by Hub** | 19,130 | | 13,533 | | 17,671 |
| **Percent of Total** | 100.0% | | 70.7% | | 92.4% |

### *4. Sierra Vista*

As previously noted, in terms of service to a second hub such as Las Vegas, Sierra Vista is located just beyond the traditional range of turboprop regional/commuter aircraft (426 miles). Therefore, Las Vegas was not reviewed as a potential hub for Sierra Vista. The market is currently served by America West Express to Phoenix. From a pure destination standpoint, airline service to Phoenix can meet the majority of the needs of Sierra Vista travelers who are destined for Phoenix, other Arizona cities, and beyond markets. As shown in Table 7-9, Arizona captures the highest level of demand from the Sierra Vista market with over 33 percent of all enplanements traveling to Phoenix or other locations in Arizona. Other states that capture a high level of demand include California, Texas, Colorado, and Georgia. All of these states can be easily accessed with connections in Phoenix. The number of daily departures and specific aircraft types that can be supported on a Sierra Vista-Phoenix route will be analyzed in a subsequent section.

## C. Small Communities

Kingman, Safford, Sedona, Show Low, and Winslow-Holbrook were assigned to the small community category based on their estimated potential enplanement levels. Of these five markets, only two currently have scheduled commercial air service, Kingman and Show Low. Based on the level of estimated potential enplanements developed in the previous chapter, service to a single hub airport is the most likely option for these markets. For most of these communities, Phoenix is the most logical choice for a connecting airline hub given the economic, medical, and transportation ties which draw travelers from around the State. Therefore, Phoenix was the primary, although not necessarily the only, hub considered for the small communities.

### *1. Kingman*

Kingman is one of the two small community markets that currently has scheduled airline service. This service is supported financially through the federal Essential Air Service (EAS) program which guarantees airline service to certain markets as determined through Federal legislative action and guidelines. Commercial airline service to Kingman is currently provided by America West Express using Beech 1900 aircraft.

Using survey results, potential enplanements for the Kingman market were estimated at 8,643, an average of 24 enplanements per day. Due to Kingman's proximity to Las Vegas, the Las Vegas hub was also considered as a service option for Kingman. USDOT records show that 72 percent of the existing demand from Kingman is destined for locations in Arizona, 13 percent is destined for points in New Mexico, 12 percent is destined for cities in California, and 3 percent is destined for various locations in Texas. Airline service to Phoenix meets the majority of the needs of Kingman travelers who are destined for Phoenix

and other Arizona cities. The stage length from Kingman to Phoenix is 160 miles; it is only 96 miles to Las Vegas from Kingman. In terms of service to the destinations where travelers are going, Phoenix offers 50 departures to Arizona markets, while Las Vegas has 47. To California, Phoenix has 175 departures while Las Vegas has 162. With such a high level of demand destined for cities in Arizona and the ability of Phoenix to also serve demand for air travel to the other states, it appears service to the Phoenix hub is still the most suitable for the Kingman market. The route analysis will examine the level of service that may be able to be provided to Phoenix using the potential demand estimate for the Kingman market. Service opportunities to Las Vegas will also be considered.

### *2. Safford*

Service is not currently provided to Safford, but the community has expressed an interest in obtaining commercial air service. At one point, Safford did have commercial airline service. In addition, the largest regional employer, Phelps Dodge, currently engages an on-demand charter service to meet the company's air travel needs. This carrier is interested in expanding its operation to provide scheduled commercial airline service to other non-company related travelers.

Demand for the Safford market was estimated using a per capita methodology which estimated the potential demand for commercial air travel based on the market's population. Total potential enplanements for the Safford market were estimated at 5,640, an average of 15 enplanements per day. Since data were not available on the specific travel patterns of air travelers from Safford, it was assumed that service to Phoenix would be the most logical choice to meet the needs of passengers associated with this market. The route analysis will examine the level of service that may be able to be supported to Phoenix using the potential demand estimate for the Safford market.

### *3. Sedona*

Service is not currently provided to Sedona, but several carriers have provided service in the past including Scenic Airlines which served the market until 1995. As a significant tourist destination, Sedona attracts travelers from all over. Most of these travelers currently travel by car or on a tour bus to Sedona as part of a multiple-stop tour. Segments of the community have expressed interest in attempting to re-secure commercial air service.

Demand for the Sedona market was estimated using the per capita methodology. Total potential enplanements for the Sedona market were estimated at 6,284, an average of 17 enplanements per day. Since data were not available on the specific travel patterns of air travelers to and from Sedona, it was assumed that service to Phoenix would be the most logical choice to meet the needs of most passengers. The route analysis will examine the

level of service that may be able to be supported to Sedona using the potential demand estimate for the Sedona market.

### *4. Show Low*

Sunrise Airlines currently provides service to Show Low using an aircraft purchased by the City of Show Low. The City entered into a 10-year agreement with Sunrise Airlines to provide scheduled commercial air service. The agreement calls for Sunrise to lease the City-owned aircraft; the City provides a guaranteed level of profit in exchange for safe, reliable scheduled air service between Show Low and Phoenix.

Using survey results, potential enplanements for the Show Low market were estimated at 6,964, an average of 19 enplanements per day. Even though the Show Low market currently has scheduled service, data on the specific travel patterns of current Show Low air travelers were not available from the USDOT because service has not been in operation for a long enough period of time. Based on existing service to Phoenix and discussions with Show Low representatives, it was assumed that service to Phoenix is the most logical choice to meet the needs of passengers in the Show Low market. The route analysis will examine the level of service that can be supported to Phoenix using the potential demand estimate for the Show Low market.

### *5. Winslow-Holbrook*

Commercial air line service is not currently provided to Winslow-Holbrook, but the area has expressed an interest in obtaining air service. Winslow once had commercial air service, but the carrier who provided this service left the market. The area recognizes the importance of commercial air service to support and enhance economic development and tourism.

Demand for the Winslow-Holbrook market was estimated using the per capita methodology. This methodology considered the population of Winslow and Holbrook. Total potential enplanements for the Winslow-Holbrook market were estimated at 4,298, an average of 12 enplanements per day. Since data are not available on the specific travel patterns of air travelers from Winslow-Holbrook, it was assumed that service to Phoenix would be the most logical choice to meet the needs of most passengers. The route analysis will examine the level of service that may be able to be supported to Phoenix using the potential demand estimate for the Winslow-Holbrook market.

## D. Grand Canyon

As previously noted, the Grand Canyon market is difficult to categorize in terms of large, intermediate, or small for the purposes of this analysis due to its unique service characteristics. In 1997, Grand Canyon National Park Airport enplaned over 600,000

passengers, more than five times the enplanements of the other markets analyzed in this study. Almost all of these enplanements are tourists who fly on charter carriers from Las Vegas, board a tour bus directly from the airplane, tour the Canyon, and then return the same day. These passengers do not even pass through the terminal, for the most part.

The resident population base of the Grand Canyon totals approximately 2,500. Information obtain during this statewide air service study indicates that roughly 98 percent of this airport's existing enplanements are related to tourists who come to the area strictly to see the Grand Canyon. It is estimated that roughly 15,800 annual enplanements are associated with this market that are not "Canyon-related." These air travelers may now be flying on one of the many charter carriers that serves this market or they may be driving to another airport, either within or beyond Arizona, to begin their scheduled commercial airline travel. For this analysis, it was assumed that the air transportation needs of the vast majority of the air travelers that are associated with this market will continue to be met by carriers that fall into the charter category. To analyze the ability of the Grand Canyon Airport to support regularly scheduled commercial airline service, it was assumed that there are approximately 15,800 annual enplanements who could be potential candidates to use this service. The feasibility of actually capturing this level of annual demand will be discussed subsequently in this study.

### E. Summary of Hub Assignment Process

The previous sections have summarized the results of the hub assignment process for each of the markets. As noted, the hub assignment process was tailored to each market size category. The next step in the air service evaluation is to subject the potential enplanement levels to the actual route analysis to the candidate hubs discussed above. The route analysis will determine if new or improved service can be successfully implemented from the carrier's economic viewpoint. In order to provide a better understanding of the type of airline service that is viable from the carrier's economic viewpoint, a discussion of airline operating costs is provided prior to the route analysis.

## 3. COST OF AIRLINE OPERATIONS

There is a common misconception among many commercial airline travelers related to the cost of operating regional/commuter type aircraft in comparison to the jet aircraft flown by major airlines. In this regard, travelers in smaller communities receiving feeder air service to and from a connecting hub airport are often disconcerted by the air fares between their community and the hub versus the hub and the final destination. Typically, the trip between their community and the hub (say 150 miles) will cost as much as the longer jet ride from the hub to the final destination (say 1,000 miles).

The outcry from smaller communities to regional/commuter aircraft operators concerning their perceived high fares is commonplace, because access to the nation's air transportation system from smaller and more rural communities is constrained by high fares. Many of these communities find that air travelers, particularly the vacation or pleasure traveler who is the most sensitive to price, has

taken to driving an automobile to the nearest hub airport and then departing by air from there. This trend decreases demand from the local airport, often resulting in a cutback in air service, which again leads to even more passengers leaving the local market. This negative spiral effect has sometimes been called the "death spiral" for small airport service, since it can lead to the ultimate discontinuation of airline service from a community.

To understand why passenger leakage and the spiral effect occur, it is important to examine the structure of air fares as they relate to the cost of operating airline equipment. On the surface, it would seem that a large jet aircraft would cost more to operate than a small twin-engine propellor aircraft - and they do. But the key to air fares is not only the overall cost of operating the aircraft, rather, the cost per seat to carry each passenger. Fares are based upon the cost per passenger, which may differ from the relative costs between aircraft types.

An example will be used to illustrate the fare and cost structure. Say a small aircraft costs $500 to operate between 2 cities, but it will only hold one passenger. Another larger aircraft costs $1,000 to operate between the same 2 cities, but holds 10 passengers. Assuming both planes are full, the passenger on the small plane must pay $500 to cover costs, while the passengers on the larger plane pay only $100 each for the same trip. This cost/fare structure example illustrates the kind of economics at work in Arizona on the in-state regional/commuter routes, versus the large jet routes from Phoenix and Tucson to out-of-state destinations.

### A. Direct Available Seat Mile Cost

In order to quickly compare operating costs, the airline industry uses a common measure: cost per available-seat-mile (ASM). These are the allocated costs that show how much it actually costs to move one airplane seat, one mile. Of course, these numbers are derived from each airline's periodic financial statements and operating schedules, but they provide a good relative measure of cost, by aircraft type. As subsequently demonstrated later, larger jet aircraft have much lower costs per ASM than do small turbo-prop aircraft. These differences form the basis of pricing differences that may at first seem unfair, but in fact, are simply a reflection of actual costs.

Typically, ASM costs can be developed to include direct costs, fully allocated costs, overhead costs, and the incremental costs associated with various types of commuter aircraft. All of these costs, except the direct costs, are subject to the management structure, financial position, indebtedness, station management techniques, airport costs, etc., of an airline. Thus, if an airline is well managed and has a low debt structure, its overall costs (sometimes called "fully loaded" costs) will be lower per ASM than airlines with inefficient management practices and high debt levels.

For this analysis, only the ***direct*** ASM costs were used to compare relative aircraft operating costs. This method of comparison helps to eliminate unusual cost differences between airlines that may appear in the ASM due to the management or relative debt position of the airlines. Instead, the direct costs measure compares components like fuel, crew costs, rentals, insurance, taxes, maintenance, and depreciation - items that do not change significantly between airlines. Thus, to fairly compare aircraft operating costs between regional and major airlines and to get a more realistic picture of the economic differences caused solely by the aircraft equipment, direct ASM costs were used.

**Table 7-13** shows the direct operating costs by ASM for seven different types of aircraft - four regional/commuter aircraft types and three large jet aircraft types. Of the four regional/commuter aircraft types, Mesa Airlines operates the Beech 1900 and the Dash-8 under their own name and as a part of the America West Express service they provide. Direct costs for these aircraft types came from data derived from and discussions with Mesa. Other regional/commuter aircraft included in the cost table were the Embraer Brasilia, a 30-seat aircraft used by SkyWest Airlines and others, and the Saab 340, a 30-seat aircraft used by American Eagle, US Airways Express, and others. As shown in Table 7-13, the Beech 1900 has the lowest direct block hour cost (measured from the time an aircraft pushes back from the gate to the time when the "blocks" are placed under the tires at the destination airport gate), but also the highest ASM cost. Mesa's direct ASM costs for the Beech 1900 run approximately 18 cents. This is almost double the cost for their Dash-8's. For comparison purposes, the Saab 340 and the Brasilia cost in the 12 to 13 cent range per ASM.

**Table 7-13**

**COMPARISON OF DIRECT OPERATING COSTS**

| Airline/Aircraft | Direct Block Hour Cost | Direct Available Seat Mile Cost |
|---|---|---|
| **Regional/Commuter** | | |
| Beech 1900 (19 Seat)* | $658 | $0.180 |
| Saab 340 (30 Seat)** | $778 | $0.132 |
| Embraer Brasilia (30 Seat)*** | $736 | $0.122 |
| Dash-8-200 (37 Seat)* | $1,121 | $0.098 |
| **Major/National** | | |
| B-737-300 (132 Seat)*** | $1,925 | PHX-LAX - $0.056<br>PHX-LAS - $0.057 |
| Airbus 320 (150 Seat)*** | $2,181 | PHX-LAX - $0.056<br>PHX-LAS - $0.057 |
| B-757-200 (189 Seat)*** | $2,562 | PHX-LAX - $0.052<br>PHX-LAS - $0.053 |

Note: PHX=Phoenix; LAX=Los Angeles; LAS=Las Vegas
* Discussions with Mesa Airlines (November, 1998)
** Discussions with US Airways Express (November, 1998)
*** Fleet average (Source: Air Transport World Magazine, 1998 Issues: February and July)

The three large jet aircraft types shown in Table 7-13 are all operated in the Phoenix market, and are flown between Phoenix and both Las Vegas and Los Angeles. America West operates the Boeing 737-300, the Airbus 320, and the Boeing 757-200 in those markets. America West has configured the B-737 for 132 seats, the A-320 for 150 seats, and the B-757 for 189 seats. As shown, the direct block hour costs for the B-757 are the highest ($2,562); while at the same time, the B-757 ASM costs are the lowest ($0.052). On this basis, one can quickly see that the more passengers that an aircraft can seat, the more the direct costs can be spread out amongst passengers and the less the cost per individual seat. Conversely, the smaller the aircraft, the fewer the number of passengers over which to spread the costs; this results in potentially higher per-seat costs to passengers flying on regional/commuter aircraft.

## B. Other Costs

The direct block hour costs shown in Table 7-13 include cost components like fuel, crew costs, rentals, insurance, taxes, maintenance, and depreciation, and other miscellaneous direct costs. These are the primary components of cost that impact air fares. Other costs that are

programmed into air fares include airline labor costs not already accounted for, interest on debt, commissions, landing fees, advertising and marketing, and food service. Differences between airline costs contained in these "other" costs stem from the different pay scales used for airline employees, the efficient use of labor and management personnel, and the relative indebtedness of each airline. The operating efficiencies at Southwest Airlines for example, have been emulated by other airlines, but seldom matched. These efficiencies occur due to lower pay rates, use of the same aircraft equipment (no cross training required for maintenance personnel or crew), and conservative use of debt financing. As a result, overall costs at Southwest are generally lower than the other major airlines. Obviously, these factors impacts each airline's fare setting policies as well.

There have been several recently published articles concerning the negative impact that airport related fees have had on regional/commuter carriers operating at the new Denver International Airport. As part of this study, the impact of such fees at Phoenix Sky Harbor, Las Vegas McCarran, and Los Angeles International was examined. Fortunately for Arizona's small and rural communities, none of these airports have fees as expensive as those at Denver International; but even so, airport landing fees and all rental expenditures for the major airlines totaled less than 14 percent of their total costs last year. Landing fees at Phoenix Sky Harbor International, for example are $0.75/1,000 pounds. Thus, a Beech 1900 may pay $12 or less to land in Phoenix, while a B-737-300 may pay a little over $100. Even if the passenger loads are less than 100 percent, landing fees for larger aircraft work out to less than $1 per passenger. At Las Vegas-McCarran International, the landing fee cost is slightly higher at $1.18/1,000 pounds. Add to these landing fee costs the station costs at an airport and they are still less than the fuel component for the airlines in their overall cost structure. Thus, airport fees are not the primary cost factor that influences airline fares. Direct aircraft operating costs and airline labor costs are the primary cost factors that influence fares.

## C. Load Factors

Load factor is defined as the percent to which the seating capacity of a plane is filled. Thus, a 100 percent load factor describes an aircraft that is completely filled. A 50 percent load factor describes a plane that is half-filled, and so on. The third major component in determining airline fares involves load factors. Low prices can be used to generate high load factors with smaller yields (profits) on each route, such as is the case with Southwest Airlines. A different strategy can be used by airlines whereby they set high prices to carry smaller load factors; this type of approach results in much higher yields per ticket sold. In both cases, load factors play a critical role in route economics for the airlines.

Airline fares are impacted significantly by the division of costs among the total number of passengers that they carry. In the past, airline charters could offer very low prices to vacation destinations simply because the charter carrier would operate at a 100 percent load factor.

Thus, the cost of the trip could be allocated among a large number of passengers. In effect, when there are no empty seats that have to be subsidized by the paying passengers, fares can be reduced. Every seat paid its share. The "charter effect," as it was called, was the process of filling a plane to its capacity through advanced bookings and low fares.

Today carriers attempt to achieve the charter effect through a complex process known as revenue management. Airlines employing revenue management pricing techniques use complex computer programs to estimate the number of seats on each flight that can be sold at varying prices. The goal is to fill the entire plane. Related objectives of this goal are to set pricing policies that will separate the business passenger (premium fare) from the vacation traveler (discount fare). Simple principles of separating these two groups include:

- Discretionary travelers can pick and choose their flying times well in advance of when they need to fly
- Business flyers have very little control over the timing of their flights and must often book a flight at the last minute

Using these two principles, airlines apply restrictions to advance booking and weekend stays to separate business and discretionary travel patterns. Discount fares can be offered to the discretionary air traveler for booking well in advance of departure or for including a weekend night as part of the itinerary. As the time draws closer to the time of an aircraft's departure, the cost of holding the seat goes up, since the seat may have to be held open and go empty. The chance that it will not be filled explains the premium that business passengers must pay for their tickets. Business travelers are paying the price of holding an available seat open that they may or may not use. For the airline to hold seats open, they must charge a higher price to travelers who are unable to book their flights well in advance of their actual date of travel. Thus, under revenue management, two travelers seated side by side may have paid fares that were hundreds of dollars different.

To offer reasonable fares in smaller Arizona communities, aircraft must fly with high load factors. Even then, fares between Arizona cities and Phoenix or Las Vegas, using regional/commuter type aircraft, will still be higher than desired because the ASM costs on smaller aircraft that are and that will be used to serve these markets are higher than those for larger jet aircraft equipment. Because of the inherent high cost to operate smaller turboprop aircraft (see Table 7-13), the only potentially moderating influence on air fares for smaller and more rural markets is the load factor. In theory, higher load factors will permit costs to be shared by more people and air fares may be reduced. This is the basis for revenue management programs being used by the airlines.

Mesa's upcoming implementation of a new revenue management program may help in lowering fares for advance purchase passengers in the cities they serve in Arizona, thus increasing load factors. Such a program would increase the utilization of aircraft equipment

by proliferating more discount fares. Even so, it is particularly difficult to initiate creative pricing schemes with 19-seat aircraft, since only a small number of seats can be designated for low fares. Mesa's standard has been to allocate a maximum of 4 seats on 19-seat aircraft for discount fares. This pricing practice has resulted in low load factors on many flights as travelers have chosen other departure airports because of the lack of availability of discount fares in their local markets . Mesa's new revenue management program is expected to open up a larger number of low fare seats when it is implemented.

## D. Discussions With Airlines

Discussions were held with route planners and airline management at two regional carriers: Mesa and American Eagle. In discussing what it would take to initiate new airline service to a community, the most important factor, say airline route planners, is the availability of aircraft equipment and the rate of return that could be expected on that equipment when flying a selected route. In this regard, airline route planners look for several key factors when analyzing a community for potential service; these factors include population, business and industrial activity, and historical air travel statistics. How these factors are expected to grow is also considered. Internal airline forecasts of a community's potential make or break the possibility of air service. These airline predictions can be influenced to a degree by each community with the introduction of new information concerning business trends or economic development that may not be known to the airline.

Arizona cities are competing not only with each other but also with other cities across the nation for each new aircraft that comes into the carriers' fleet. In terms of priority, the city that can generate the highest rate of return on the aircraft equipment - through load factors and fares - gets the first opportunity for service. The second highest return is next, and so on. This applies to cities that already have airline service, as well as to those cities that do not have service. Similarly, cities with existing turboprop service that want to upgrade to regional jet aircraft equipment must compete with an airline's entire route system for service by a new aircraft.

In some cases, additional premiums offered to the airlines by cities in the form of Essential Air Service (EAS) subsidies, privately financed seat guarantees, or other subsidies have been enough to raise the priority of a particular city or market in question to receive new service. These subsidies can be costly and must be viewed as a last resort to attracting airline service. If service is to endure, it will ultimately have to pay for itself. In this regard, the economies of scale described in the term "ASM cost" favor larger communities that can support higher load factors on larger aircraft. With this fact in mind, a computer model was employed to evaluate each of the study airports/communities to determine their ability to support scheduled commercial airline service that would be financially self-sufficient.

# 4. ROUTE ANALYSIS MODEL

The financial feasibility of providing self-supporting commercial air service was conducted using an interactive computerized air service model that analyzes specific city pairs. The model evaluates specific input data related to passenger demand between cities. Based on this input data, the model then produces several types of output which are useful in determining if air service between the specified cities is economically feasible from a potential carrier's viewpoint. This determination is made by comparing the break-even fare required for a particular route to the actual fare charged on a route.

In general, the following input data are required for the air service model:

- Passenger demand levels between cities
- Stage lengths between cities
- Different aircraft types
- Current aviation fuel costs
- Number of daily departures for the proposed route
- Schedule frequency (5, 6, or 7 days per week)
- Passenger facility charges (PFCs) at each airport

Using this input data, the following information is produced by the air service model:

- Total daily passengers on the route
- A Standard Industry Fare Level (SIFL) for the route
- An expected yield per coupon mile for the route
- Average load factor per flight
- Daily one-way aircraft operating costs
- Break-even average minimum fare for the route
- Profit or loss per enplanement for the route
- Annual profit or loss for the route

**Exhibit 7-2** depicts a sample output from the route analysis model. The following sections discuss the various parts of the sample route analysis shown in Exhibit 7-2 in greater detail.

**Section A** of the output from the route analysis provides a general overview of the particular route (i.e., cities) being analyzed. In addition to identifying the city pair, the level of airline competition, a weekly schedule, and any Passenger Facility Charges (PFCs) at the airports serving the cities being analyzed are shown.

**Route:** Nonstop Service from Example Airport to Chicago, IL. (A)

(Full Competition Market)

**Schedule:** 6 Days per Week Schedule

**PFCs:** Example Airport's PFC = $3
Chicago, IL's PFC = $0

**Summary:**

| (B) | (C) Enplanements | | (D) | Market Rev. Potential | |
|---|---|---|---|---|---|
| | Annual | Daily | Stage Length | SIFL 1-Way Fare | SIFL Yield /CPM |
| Between Example Airport and Chicago, IL | 23,809 | 76 | 325 | $132 | $0.361 |

**Aircraft Operational Data:** (E)

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements per Flight | Average Load Factor | Block Time (min) |
|---|---|---|---|---|---|
| DASH-8-100 | 1 | 36 | 76 | > LDF | 84 |
| DASH-8-100 | 2 | 36 | 38 | > LDF | 84 |
| DASH-8-100 | 3 | 36 | 25 | 70.7% | 84 |
| DASH-8-100 | 4 | 36 | 19 | 53.0% | 84 |
| DASH-8-100 | 5 | 36 | 15 | 42.4% | 84 |
| DASH-8-100 | 6 | 36 | 13 | 35.3% | 84 |

**Costs and Fares:** (F)

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs: Total | Other | Direct | Breakeven Avg Minimum One-Way Fare 1/ | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|
| DASH-8-100 | 1 | $1,377 | $928 | $2,305 | $40 | $92 |
| DASH-8-100 | 2 | $2,755 | $1,855 | $4,610 | $76 | $56 |
| DASH-8-100 | 3 | $4,132 | $2,783 | $6,915 | $113 | $19 |
| DASH-8-100 | 4 | $5,509 | $3,711 | $9,220 | $149 | ($17) |
| DASH-8-100 | 5 | $6,887 | $4,639 | $11,525 | $186 | ($54) |
| DASH-8-100 | 6 | $8,624 | $5,566 | $13,830 | $222 | ($90) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-100 | 1 | $2,201,166 |
| DASH-8-100 | 2 | $1,330,971 |
| DASH-8-100 | 3 | $460,776 |
| DASH-8-100 | 4 | ($409,419) |
| DASH-8-100 | 5 | ($1,279,614) |
| DASH-8-100 | 6 | ($2,149,809) |

(G)

Includes increases to account for Federal Ticket Tax (10%), minimum airline profit (10%), and PFC's (if applicable).

*60 minute

As shown on the example, the route being analyzed is considered to be a full competition market with nonstop service between the "example airport" and Chicago, Illinois. A full competition market is an airport that is considered to have a normal or high level of competition among its airlines. This distinction is important because fares are typically average, or lower than average, at full competition airports. Airports with service by only one airline to one hub are considered to be low competition markets and, therefore, might be expected to have somewhat higher than average fares. This is the case for almost all of the Arizona markets being analyzed in this study.

For the example airport, a six-day per week schedule was assumed, indicating that the route will be flown six days of the week (i.e., Monday through Saturday). For the actual route analysis conducted as part of this study, a seven-day per week schedule was frequently used for routes within Arizona. Finally, the PFCs being charged at any of the airports being analyzed were input into the route analysis model.

**Section B** of the route analysis example contains information related to the volume of passenger enplanements between the cities. It is important to note that this demand figure is an aggregation of regional demand, not just demand for one specific city. For illustrative purposes, it is assumed that approximately 23,809 potential passenger enplanements could be served if new service were provided between the example airport and the Chicago hub. The model calculates the number of average daily enplanements based on the weekly operating schedule chosen.

**Section C** of the route analysis model shows the distance, or stage length, in nautical miles between the two cities being analyzed.

**Section D** of the route analysis model shows a one-way Standard Industry Fare Level (SIFL) which is calculated by the model. This fare represents a measure of the nationwide average fare that is charged to passengers on all routes of the same approximate length. As shown in Exhibit 7-2, the SIFL one-way fare calculated for the example route is $132. This fare is then translated into the yield per coupon mile that is based on the SIFL one-way fare and the one-way stage length. The yield per coupon mile is a standard industry measure of a route's relative revenue producing capability.

**Section E** of the route analysis model provides an overview of the aircraft operational characteristics, in terms of type of aircraft, number of seats, number of daily departures, enplanements per flight, average load factor, and block hour time.

For this particular example, a 36-seat Dash-8-100 aircraft was chosen to operate on the route. The number of daily departures for this aircraft was increased from one to six. Based on the number of daily departures, the model then calculates the number of enplanements per flight and average load factor. An "> LDF" symbol shown under the average load factor column indicates that there are more enplanements than seats available on the aircraft for that particular number of daily departures. Finally, the model calculates the operating block time (in minutes) for this particular route. The

block time represents the time when the blocks are removed from under the aircraft wheels at the departure airport to the time when the blocks are placed under the aircraft wheels at the arrival airport. This time is also commonly referred to as the "ramp-to-ramp block time." The block time for each route is dependent on the normal cruising speed of the chosen aircraft and the stage length of the route.

**Section F** of the route analysis model depicts the overall profitability or operating loss of the route subject to evaluation. Based on the operating costs of the chosen aircraft and the stage length of the route, the model calculates the daily one-way operating costs. As shown in Section F of the example route analysis, the Dash-8-100 aircraft would have a total operating cost of approximately $2,305 for one daily departure. With four daily departures, the total one-way operating cost of a Dash-8-100 aircraft is increased to approximately $9,220.

These one-way aircraft operating costs are then translated into a break-even average one-way fare, which is based on the operating costs of the aircraft and the number of enplanements per flight. It is important to note that the break-even average one-way fare estimate is increased to include the current Federal Ticket Tax, segment tax, and the PFC's charged at each airport, when applicable.

With the break-even average one-way fare calculated, the model then calculates the profit or loss of the route based on the number of daily departures. As shown in Exhibit 7-2, one daily departure from the example airport to Chicago with a Dash-8-100 aircraft would return a profit of approximately $92 per enplanement ($132 minus $40); four daily departures would result in a loss of approximately $17 per enplanement. As indicated by the model, up to three daily departures for the example airport to Chicago would be profitable.

**Section G** of the example route analysis presents the profit or loss of a particular route on an annualized basis. As shown on the example, one daily departure would result in an annual profit of approximately $2.2 million. Four daily departures, however, would result in an annual loss of approximately $409,400. Three daily departures, on the other hand, would return a profit of approximately $460,776.

The route analysis model is a tool that can be used to determine the general feasibility of providing scheduled airline service between two candidate markets. The model results can be used to show the number of daily flights that can be operated at a profit by a prospective carrier. It should be noted that most carriers have their own models or methodologies for analyzing the feasibility/profitability of routes they are considering. The results of the route analysis can be used by each community as a general guide to indicate if and where the community can support improved scheduled commercial air service. The following sections discuss the specific conclusions that were drawn for each of the Arizona markets included in this study based on the route analyses.

# 5. RESULTS OF THE AIR SERVICE ANALYSES

The results of the air service analyses for the 13 study airports are presented in the following sections. It is important to note that the route analysis model is used only for analytical purposes. The model does not make decisions on which hubs to analyze and what service combinations are most logical. The decisions about the routes and service combinations were made previously based on the results of analyses conducted earlier in this study. This section primarily describes the results of the modeling undertaken for each airport. Based on the results of the route analysis, an action plan for each airport will be provided in a subsequent chapter.

## A. Bullhead City/Laughlin

Laughlin Bullhead International Airport currently has year-round regional/commuter service on America West Express to Phoenix. This service is provided using 19-passenger Beech 1900 aircraft. Seasonally, charter carriers also provide service to the market to accommodate the demand generated by the gaming resorts located in the area. The service provided by the charter carriers is on large jet aircraft, such as the Boeing 727. Local residents and visitor related travelers can actually purchase unsold seats on the scheduled charter aircraft to travel by air to and from Bullhead City/Laughlin.

Because of the level of potential demand identified for Bullhead City, the market was categorized as "large". Therefore, the hub assignment process and route analyses focused on the ability of this market to support service to more than one connecting hub airport. Based on historical service that has been provided to this airport, potential demand levels identified in this study, and the hub assignment process, the route analysis for Bullhead City focused on the airport's ability to support service to Las Vegas, Los Angeles, and/or Phoenix. **Tables 7-14** through **7-16** present the results of the route analyses performed for Bullhead City to these airline connecting hubs. The results of the route analyses for Bullhead City are discussed in the following sections:

- Las Vegas - The Bullhead City/Laughlin area has strong economic and transportation ties to Las Vegas due to its proximity and the influences of the gaming industry. Many carriers provide a high level of service from Las Vegas, with

  America West and Southwest providing the highest number of daily scheduled flights. However, no single carrier operates a true connecting hub from this airport. Therefore, the analysis conducted in this study is based on assumptions related to aircraft that might be used by a carrier in this market. The existing aircraft fleet used by carriers currently operating at Las Vegas was used as a guide related to assumptions that were made in this part of the analysis.

TABLE 7-14

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS BULLHEAD CITY - LAS VEGAS
B-737-300

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Bullhead City/Laughlin to Las Vegas, NV. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Bullhead City/Laughlin's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Bullhead City/Laughlin and Las Vegas, NV | 73,525 | 201 | 84 | $59 | $0.579 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| B-737-300 | 1 | 128 | 201.4 | > LDF | 25 | 0% | 0% |
| B-737-300 | 2 | 128 | 100.7 | 78.7% | 25 | 0% | 0% |
| B-737-300 | 3 | 128 | 67.1 | 52.5% | 25 | 0% | 0% |
| B-737-300 | 4 | 128 | 50.4 | 39.3% | 25 | 0% | 0% |
| B-737-300 | 5 | 128 | 40.3 | 31.5% | 25 | 0% | 0% |
| B-737-300 | 6 | 128 | 33.6 | 26.2% | 25 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| B-737-300 | 1 | $993 | $1,020 | $2,013 | $10 | $16 | $43 |
| B-737-300 | 2 | $1,986 | $2,039 | $4,025 | $20 | $28 | $31 |
| B-737-300 | 3 | $2,978 | $3,059 | $6,037 | $30 | $40 | $19 |
| B-737-300 | 4 | $3,971 | $4,079 | $8,050 | $40 | $52 | $7 |
| B-737-300 | 5 | $4,964 | $5,098 | $10,062 | $50 | $64 | ($5) |
| B-737-300 | 6 | $5,957 | $6,118 | $12,075 | $60 | $76 | ($17) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| B-737-300 | 1 | $3,161,575 |
| B-737-300 | 2 | $2,279,275 |
| B-737-300 | 3 | $1,396,975 |
| B-737-300 | 4 | $514,675 |
| B-737-300 | 5 | ($367,625) |
| B-737-300 | 6 | ($1,249,925) |

TABLE 7-15

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS BULLHEAD CITY - LOS ANGELES
B-737-300

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Bullhead City/Laughlin to Los Angeles, CA. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Bullhead City/Laughlin's PFC = | $3 |
| | Los Angeles, CA's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Bullhead City/Laughlin and Los Angeles, CA | 71,753 | 197 | 230 | $86 | $0.319 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| B-737-300 | 1 | 128 | 196.6 | > LDF | 46 | 0% | 0% |
| B-737-300 | 2 | 128 | 98.3 | 76.8% | 46 | 0% | 0% |
| B-737-300 | 3 | 128 | 65.5 | 51.2% | 46 | 0% | 0% |
| B-737-300 | 4 | 128 | 49.1 | 38.4% | 46 | 0% | 0% |
| B-737-300 | 5 | 128 | 39.3 | 30.7% | 46 | 0% | 0% |
| B-737-300 | 6 | 128 | 32.8 | 25.6% | 46 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| B-737-300 | 1 | $1,844 | $1,894 | $3,738 | $19 | $27 | $59 |
| B-737-300 | 2 | $3,688 | $3,788 | $7,476 | $38 | $50 | $36 |
| B-737-300 | 3 | $5,532 | $5,682 | $11,214 | $57 | $72 | $14 |
| B-737-300 | 4 | $7,376 | $7,576 | $14,952 | $76 | $95 | ($9) |
| B-737-300 | 5 | $9,221 | $9,470 | $18,691 | $95 | $118 | ($32) |
| B-737-300 | 6 | $11,065 | $11,364 | $22,429 | $114 | $141 | ($55) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| B-737-300 | 1 | $4,233,427 |
| B-737-300 | 2 | $2,583,108 |
| B-737-300 | 3 | $1,004,542 |
| B-737-300 | 4 | ($645,777) |
| B-737-300 | 5 | ($2,296,096) |
| B-737-300 | 6 | ($3,946,415) |

TABLE 7-16

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS BULLHEAD CITY - PHOENIX
DASH-8-200B

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Bullhead City/Laughlin to Phoenix, AZ. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Bullhead City/Laughlin's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Bullhead City/Laughlin and Phoenix, AZ | 46,651 | 128 | 129 | $75 | $0.491 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 3 | 37 | 42.6 | > LDF | 43 | 0% | 0% |
| DASH-8-200B | 4 | 37 | 32.0 | 86.4% | 43 | 0% | 0% |
| DASH-8-200B | 5 | 37 | 25.6 | 69.1% | 43 | 0% | 0% |
| DASH-8-200B | 6 | 37 | 21.3 | 57.6% | 43 | 0% | 0% |
| DASH-8-200B | 7 | 37 | 18.3 | 49.3% | 43 | 0% | 0% |
| DASH-8-200B | 8 | 37 | 16.0 | 43.2% | 43 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 3 | $1,686 | $1,135 | $2,821 | $22 | $30 | $45 |
| DASH-8-200B | 4 | $2,247 | $1,514 | $3,761 | $29 | $39 | $36 |
| DASH-8-200B | 5 | $2,809 | $1,892 | $4,701 | $37 | $48 | $27 |
| DASH-8-200B | 6 | $3,371 | $2,271 | $5,642 | $44 | $57 | $18 |
| DASH-8-200B | 7 | $3,933 | $2,649 | $6,582 | $51 | $66 | $9 |
| DASH-8-200B | 8 | $4,495 | $3,028 | $7,523 | $59 | $75 | $0 |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 3 | $2,099,295 |
| DASH-8-200B | 4 | $1,679,436 |
| DASH-8-200B | 5 | $1,259,577 |
| DASH-8-200B | 6 | $839,718 |
| DASH-8-200B | 7 | $419,859 |
| DASH-8-200B | 8 | $0 |

It is anticipated that service to Las Vegas would primarily be used to serve passenger demand destined for locations in Nevada and California, although it is possible that demand for travel to cities in states located in the Northwest could also be served via connections at Las Vegas. It is important to note that cities in some of the states located in the Northwest can be served as well or better by service from the Phoenix hub. As previously noted, destinations in California currently attract the highest level of passenger demand from the Bullhead City market. To evaluate the feasibility of service to Las Vegas, demand for destinations in California, Nevada, Oregon, and Washington were used in the route analysis. Based on the resultant level of demand to destinations in these states, passenger demand levels between Bullhead City and Las Vegas could be served with major/national jet equipment. Using the B-737-300, a standard aircraft used by many carriers on short-haul routes, four flights per day appear to be financially feasible, according to the model. The likelihood of a carrier providing service using this aircraft and the potential feasibility of this service will be discussed further in Chapter Eight.

- Los Angeles – With such a high level of demand from the Bullhead City/Laughlin area being generated for various locations in California, service to Los Angeles is a logical choice. To evaluate the financial feasibility of service to Los Angeles, only the potential demand identified for markets in California was used in the route analysis. Again, based on the high level of passenger demand, service on major/national jet equipment could be supported, according to the model.. Using the B-737-300, three flights per day appear to be financially viable between Bullhead City and Los Angeles. It is important to note that passenger demand used to assess the feasibility of service to Los Angeles was also used in the assessment of service to Las Vegas, hence sufficient passenger demand does not exist to support service to both locations.

- Phoenix – Service to Phoenix is currently provided from Bullhead City by America West Express on a year-round basis using Beech 1900 aircraft. Through the hub assignment process, Phoenix has the ability to capture the highest percentage of this market's total potential passenger demand at over 83 percent. Because of the overlaps in passengers that could be attracted by service to Las Vegas, Los Angeles, and/or Phoenix, the potential demand estimates for these three hubs are duplicative. The California enplanements assigned to either Las Vegas or Los Angeles and the Nevada, Oregon, and Washington enplanements assigned to Las Vegas were subtracted from the market's total potential enplanement level that was identified in this study (120,176) to estimate the remaining number of passengers that would be available to support Phoenix service (46,651). Assuming the carrier upgraded the equipment used between Bullhead City and Phoenix to the Dash-8-200s, it appears that eight round trips per day could be supported, according to output from the computer model.

In all, the route analysis showed that Bullhead City's potential demand level can support a total of three or four major/national jet departures to either Los Angeles or Las Vegas and eight regional/commuter departures per day to Phoenix. Currently, the regularly scheduled regional/commuter service in this study community consists of four departures per day on Beech 1900 aircraft to Phoenix.

Based on the potential passenger demand estimate for this market and the route analyses, it is likely that service can best be provided to two airline hubs on a regular basis. While this level of service is theoretically possible for the Bullhead City market, actually obtaining and supporting new and existing service in this market will be impacted by several factors. These factors and a specific marketing strategy for the Bullhead City/Laughlin market will be discussed in a subsequent chapter.

## B. Flagstaff

Flagstaff-Pulliam Airport currently has year-round regional/commuter service on America West Express to Phoenix. This service is provided using both Dash 8-200 and Beech 1900 aircraft.

The hub assignment process and route analyses focused on the ability of this market to support service to more than one connecting hub airport due to the market's inclusion in the large category in terms of its potential enplanements. Based on historical commercial airline service that has been provided to this airport, potential demand estimates defined in the previous chapter, and the hub assignment process, the route analyses for Flagstaff focused on the airport's ability to support service to Las Vegas, Los Angeles, and/or Phoenix. **Tables 7-17** through **7-22** present the results of the route analyses performed for Flagstaff to these hubs. The results of the route analyses for Flagstaff are discussed in the following sections:

- Las Vegas - Many carriers provide a high level of service from Las Vegas, with America West and Southwest providing the highest number of daily scheduled flights. However, no single carrier operates a true connecting hub from this airport. Therefore, the analysis conducted in this study and for this airport is based on assumptions related to aircraft that might be used by a carrier to serve this hub. The existing aircraft fleet used by carriers currently operating at Las Vegas was used as a guide. It is anticipated that service to Las Vegas would primarily be used to serve passenger demand destined for cities located in California, Colorado, Nevada, Oregon, Utah, and Washington. As previously noted, destinations in California currently attract the highest level of passenger demand from the Flagstaff market. To evaluate the feasibility of service to Las Vegas, an annual potential enplanement level of 40,617 was used. Based on this level of potential passenger demand, airline service between Flagstaff and Las Vegas could be supported on the 30-seat Embraer 120, a twin engine turboprop. Seven flights a day could be supported on a seven-day

TABLE 7-17

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS FLAGSTAFF - LAS VEGAS
EMBRAER 120

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Flagstaff, AZ to Las Vegas, NV. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Flagstaff, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Flagstaff, AZ and Las Vegas, NV | 40,617 | 111 | 214 | $105 | $0.424 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 4 | 30 | 27.8 | 92.7% | 59 | 0% | 0% |
| EMBRAER 120 | 5 | 30 | 22.3 | 74.2% | 59 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 18.5 | 61.8% | 59 | 0% | 0% |
| EMBRAER 120 | 7 | 30 | 15.9 | 53.0% | 59 | 0% | 0% |
| EMBRAER 120 | 8 | 30 | 13.9 | 46.4% | 59 | 0% | 0% |
| EMBRAER 120 | 9 | 30 | 12.4 | 41.2% | 59 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 4 | $2,743 | $1,848 | $4,591 | $41 | $53 | $52 |
| EMBRAER 120 | 5 | $3,429 | $2,310 | $5,739 | $52 | $66 | $39 |
| EMBRAER 120 | 6 | $4,115 | $2,772 | $6,887 | $62 | $78 | $27 |
| EMBRAER 120 | 7 | $4,801 | $3,234 | $8,035 | $72 | $91 | $14 |
| EMBRAER 120 | 8 | $5,486 | $3,695 | $9,181 | $83 | $103 | $2 |
| EMBRAER 120 | 9 | $6,172 | $4,157 | $10,329 | $93 | $115 | ($10) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 4 | $2,112,084 |
| EMBRAER 120 | 5 | $1,584,063 |
| EMBRAER 120 | 6 | $1,096,659 |
| EMBRAER 120 | 7 | $568,638 |
| EMBRAER 120 | 8 | $81,234 |
| EMBRAER 120 | 9 | ($406,170) |

TABLE 7-18

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS FLAGSTAFF - LAS VEGAS
CANADAIR RJ-100

***AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY***

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Flagstaff, AZ to Las Vegas, NV. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Flagstaff, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Flagstaff, AZ and Las Vegas, NV | 40,617 | 111 | 214 | $105 | $0.424 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| CANADAIR RJ-100 | 2 | 50 | 55.6 | > LDF | 44 | 0% | 0% |
| CANADAIR RJ-100 | 3 | 50 | 37.1 | 74.2% | 44 | 0% | 0% |
| CANADAIR RJ-100 | 4 | 50 | 27.8 | 55.6% | 44 | 0% | 0% |
| CANADAIR RJ-100 | 5 | 50 | 22.3 | 44.5% | 44 | 0% | 0% |
| CANADAIR RJ-100 | 6 | 50 | 18.5 | 37.1% | 44 | 0% | 0% |
| CANADAIR RJ-100 | 7 | 50 | 15.9 | 31.8% | 44 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| CANADAIR RJ-100 | 2 | $1,603 | $1,080 | $2,683 | $24 | $33 | $72 |
| CANADAIR RJ-100 | 3 | $2,404 | $1,620 | $4,024 | $36 | $47 | $58 |
| CANADAIR RJ-100 | 4 | $3,206 | $2,159 | $5,365 | $48 | $62 | $43 |
| CANADAIR RJ-100 | 5 | $4,007 | $2,699 | $6,706 | $60 | $76 | $29 |
| CANADAIR RJ-100 | 6 | $4,809 | $3,239 | $8,048 | $72 | $91 | $14 |
| CANADAIR RJ-100 | 7 | $5,610 | $3,779 | $9,389 | $84 | $105 | $0 |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| CANADAIR RJ-100 | 2 | $2,924,424 |
| CANADAIR RJ-100 | 3 | $2,355,786 |
| CANADAIR RJ-100 | 4 | $1,746,531 |
| CANADAIR RJ-100 | 5 | $1,177,893 |
| CANADAIR RJ-100 | 6 | $568,638 |
| CANADAIR RJ-100 | 7 | $0 |

TABLE 7-19

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS FLAGSTAFF - LOS ANGELES
CANADAIR RJ-100

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Flagstaff, AZ to Los Angeles, CA. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Flagstaff, AZ's PFC = | $3 |
| | Los Angeles, CA's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Flagstaff, AZ and Los Angeles, CA | 35,781 | 98 | 394 | $160 | $0.359 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| CANADAIR RJ-100 | 1 | 50 | 98.0 | > LDF | 71 | 0% | 0% |
| CANADAIR RJ-100 | 2 | 50 | 49.0 | 98.0% | 71 | 0% | 0% |
| CANADAIR RJ-100 | 3 | 50 | 32.7 | 65.4% | 71 | 0% | 0% |
| CANADAIR RJ-100 | 4 | 50 | 24.5 | 49.0% | 71 | 0% | 0% |
| CANADAIR RJ-100 | 5 | 50 | 19.6 | 39.2% | 71 | 0% | 0% |
| CANADAIR RJ-100 | 6 | 50 | 16.3 | 32.7% | 71 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| CANADAIR RJ-100 | 1 | $1,286 | $866 | $2,152 | $22 | $30 | $130 |
| CANADAIR RJ-100 | 2 | $2,571 | $1,732 | $4,303 | $44 | $57 | $103 |
| CANADAIR RJ-100 | 3 | $3,857 | $2,598 | $6,455 | $66 | $83 | $77 |
| CANADAIR RJ-100 | 4 | $5,142 | $3,464 | $8,606 | $88 | $109 | $51 |
| CANADAIR RJ-100 | 5 | $6,428 | $4,330 | $10,758 | $110 | $136 | $24 |
| CANADAIR RJ-100 | 6 | $7,714 | $5,196 | $12,910 | $132 | $162 | ($2) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| CANADAIR RJ-100 | 1 | $4,651,530 |
| CANADAIR RJ-100 | 2 | $3,685,443 |
| CANADAIR RJ-100 | 3 | $2,755,137 |
| CANADAIR RJ-100 | 4 | $1,824,831 |
| CANADAIR RJ-100 | 5 | $858,744 |
| CANADAIR RJ-100 | 6 | ($71,562) |

TABLE 7-20

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS FLAGSTAFF - LOS ANGELES
EMBRAER 120

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Flagstaff, AZ to Los Angeles, CA. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Flagstaff, AZ's PFC = | $3 |
| | Los Angeles, CA's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Flagstaff, AZ and Los Angeles, CA | 35,781 | 98 | 394 | $160 | $0.359 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 2 | 30 | 49.0 | > LDF | 99 | 0% | 0% |
| EMBRAER 120 | 3 | 30 | 32.7 | > LDF | 99 | 0% | 0% |
| EMBRAER 120 | 4 | 30 | 24.5 | 81.7% | 99 | 0% | 0% |
| EMBRAER 120 | 5 | 30 | 19.6 | 65.4% | 99 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 16.3 | 54.5% | 99 | 0% | 0% |
| EMBRAER 120 | 7 | 30 | 14.0 | 46.7% | 99 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 2 | $2,282 | $1,537 | $3,819 | $39 | $51 | $109 |
| EMBRAER 120 | 3 | $3,424 | $2,306 | $5,730 | $58 | $74 | $86 |
| EMBRAER 120 | 4 | $4,565 | $3,075 | $7,640 | $78 | $97 | $63 |
| EMBRAER 120 | 5 | $5,706 | $3,843 | $9,549 | $97 | $121 | $39 |
| EMBRAER 120 | 6 | $6,847 | $4,612 | $11,459 | $117 | $144 | $16 |
| EMBRAER 120 | 7 | $7,988 | $5,381 | $13,369 | $136 | $168 | ($8) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 2 | $3,900,129 |
| EMBRAER 120 | 3 | $3,077,166 |
| EMBRAER 120 | 4 | $2,254,203 |
| EMBRAER 120 | 5 | $1,395,459 |
| EMBRAER 120 | 6 | $572,496 |
| EMBRAER 120 | 7 | ($286,248) |

TABLE 7-21

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS FLAGSTAFF - PHOENIX
DASH-8-200B (LAS)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Flagstaff, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Flagstaff, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | Market Rev Potential SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Flagstaff, AZ and Phoenix, AZ | 58,053 | 159 | 116 | $75 | $0.546 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 6 | 37 | 26.5 | 71.6% | 40 | 0% | 0% |
| DASH-8-200B | 7 | 37 | 22.7 | 61.4% | 40 | 0% | 0% |
| DASH-8-200B | 8 | 37 | 19.9 | 53.7% | 40 | 0% | 0% |
| DASH-8-200B | 9 | 37 | 17.7 | 47.8% | 40 | 0% | 0% |
| DASH-8-200B | 10 | 37 | 15.9 | 43.0% | 40 | 0% | 0% |
| DASH-8-200B | 11 | 37 | 14.5 | 39.1% | 40 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 6 | $3,131 | $2,109 | $5,240 | $33 | $44 | $31 |
| DASH-8-200B | 7 | $3,653 | $2,460 | $6,113 | $38 | $50 | $25 |
| DASH-8-200B | 8 | $4,175 | $2,812 | $6,987 | $44 | $57 | $18 |
| DASH-8-200B | 9 | $4,696 | $3,163 | $7,859 | $49 | $63 | $12 |
| DASH-8-200B | 10 | $5,218 | $3,515 | $8,733 | $55 | $70 | $5 |
| DASH-8-200B | 11 | $5,740 | $3,866 | $9,606 | $60 | $76 | ($1) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 6 | $1,799,643 |
| DASH-8-200B | 7 | $1,451,325 |
| DASH-8-200B | 8 | $1,044,954 |
| DASH-8-200B | 9 | $696,636 |
| DASH-8-200B | 10 | $290,265 |
| DASH-8-200B | 11 | ($58,053) |

TABLE 7-22

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS FLAGSTAFF - PHOENIX
DASH-8-200B (LAX)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Flagstaff, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Flagstaff, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Flagstaff, AZ and Phoenix, AZ | 62,889 | 172 | 116 | $75 | $0.546 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 7 | 37 | 24.6 | 66.5% | 40 | 0% | 0% |
| DASH-8-200B | 8 | 37 | 21.5 | 58.2% | 40 | 0% | 0% |
| DASH-8-200B | 9 | 37 | 19.1 | 51.7% | 40 | 0% | 0% |
| DASH-8-200B | 10 | 37 | 17.2 | 46.6% | 40 | 0% | 0% |
| DASH-8-200B | 11 | 37 | 15.7 | 42.3% | 40 | 0% | 0% |
| DASH-8-200B | 12 | 37 | 14.4 | 38.8% | 40 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 7 | $3,653 | $2,460 | $6,113 | $35 | $47 | $28 |
| DASH-8-200B | 8 | $4,175 | $2,812 | $6,987 | $41 | $53 | $22 |
| DASH-8-200B | 9 | $4,696 | $3,163 | $7,859 | $46 | $59 | $16 |
| DASH-8-200B | 10 | $5,218 | $3,515 | $8,733 | $51 | $65 | $10 |
| DASH-8-200B | 11 | $5,740 | $3,866 | $9,606 | $56 | $71 | $4 |
| DASH-8-200B | 12 | $6,262 | $4,218 | $10,480 | $61 | $77 | ($2) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 7 | $1,760,892 |
| DASH-8-200B | 8 | $1,383,558 |
| DASH-8-200B | 9 | $1,006,224 |
| DASH-8-200B | 10 | $628,890 |
| DASH-8-200B | 11 | $251,556 |
| DASH-8-200B | 12 | ($125,778) |

per week schedule with the Embraer 120. With a Canadair Regional Jet (CRJ), six flights per day could be supported on a seven-day per week schedule on this same route.

- Los Angeles - With much of the Flagstaff demand destined for cities within California, service to Los Angeles is a logical choice. An annual enplanement level of 35,781 was used to evaluate the financial feasibility of service to Los Angeles. This potential enplanement level was derived from enplanements destined not only to locations in California, but also to cities in Oregon and Washington. Based on the resultant level of potential passenger demand, regional/commuter jet aircraft could be supported. Operating the 50-seat CRJ aircraft, five flights a day could be supported. Operating the smaller 30-seat Embraer 120, six flights a day could be supported. A seven-day per week schedule was assumed to evaluate both aircraft. It is important to note that potential demand used to evaluate service to Los Angeles was in part also used to evaluate the feasibility of service to Las Vegas; as a result of the duplication of assigned potential passenger demand to these two hub, service to only one of these two potential points of service may be feasible.

- Phoenix - Year-round service to Phoenix is currently provided from Flagstaff by America West Express using the 37-passenger Dash 8 and Beech 1900 aircraft. Results of the hub assignment process indicate that Phoenix has the ability to capture the highest percentage of this market's total potential demand, at over 80 percent. Because of the overlaps in potential passenger attraction between Las Vegas, Los Angeles, and Phoenix, the assignment of potential demand estimates between these three hubs are duplicative to some degree. Since the passenger demand at Flagstaff is large enough to support service to two hubs, two scenarios were considered for the route analysis. The first scenario considers service to both Las Vegas and Phoenix, while the second considers service to both Los Angeles and Phoenix. The level of enplanements that would be captured by Phoenix differs for each scenario. If service were provided to Las Vegas and Phoenix, it is estimated that Phoenix would capture an enplanement level of 58,053. This number of potential passenger enplanements was determined by subtracting the level of enplanements that Las Vegas would capture (40,617) from the total potential enplanement level that was identified for this airport in this study (98,670). The enplanement level for Phoenix in the second scenario was determined by subtracting the number of enplanements that Los Angeles would capture (35,781) from the from the market's total potential enplanement level that was identified in this study (98,670), leaving 62,889 enplanements to support Phoenix service.

  The route analysis indicates that with service to Las Vegas and Phoenix, 10 flights a day could be supported to Phoenix on Dash-8-200B aircraft. If service were provided to both Los Angeles and Phoenix, the route analysis indicates that the

Flagstaff market could support 11 flights a day to Phoenix on the Dash-8-200B. Both schedules to Phoenix are based on a seven-day per week schedule.

Overall, the route analysis indicates that Flagstaff's potential demand level can support service to two hubs with a total of 15 to 19 flights a day. America West Express currently provides the only service to Flagstaff with eight departures per day. The route analysis showed that service to Las Vegas would be able to theocratically support more flights on a daily basis than could service to Los Angeles.

While this level of service is theoretically possible for the Flagstaff market, actually obtaining and supporting new and existing service in this market will be impacted by several factors. These factors and a specific marketing strategy for the Flagstaff market will be discussed in a subsequent chapter.

## C. Grand Canyon

Grand Canyon National Park Airport serves as the air entry point for the Grand Canyon. The airport has leases with 47 different tour groups to provide access to the area. Currently, there are three operators who are carrying the highest level of air travelers to the Canyon; they are Scenic Airlines, Grand Canyon Helicopters, and Eagle Canyon. These operators use various airports in Las Vegas as a home base.

Historically, commercial service activity at Grand Canyon National Park Airport also consisted of various scheduled airlines, in addition to the air taxi/charter service. Airlines such as Republic and America West provided scheduled commercial airline service to the airport. However, these carriers have not provided regularly scheduled airline service to the Grand Canyon for many years. The most recent scheduled airline service that the airport had consisted of commuter service that stopped in Flagstaff on the way to Phoenix. Even without the provision of regularly scheduled service, enplanements at Grand Canyon National Park Airport have continued to increase through the increasing number of airline seats provided by the charter and tourist-based airline operators.

The primary travel purpose of the airport's roughly 630,000 annual enplanements is daylong sightseeing. During the summer season, the major operators have an hourly schedule to accommodate the high level of demand. These scheduled flights also allow non-tourist related air travelers, associated with the Grand Canyon market, to access commercial air service by buying seats on these flights. Once the flights arrive in Las Vegas, the passengers can then terminate their travel or connect to other airlines for travel to their final destination.

A new carrier, Far West, has applied to the Department of Transportation for an airline-operating certificate to provide scheduled service to the Grand Canyon. This carrier's plans are to provide the following service:

- Airline service from Phoenix to Flagstaff
- Bus service from Flagstaff to Williams
- Train service from Williams to the Grand Canyon
- Bus service from the Grand Canyon to Grand Canyon National Park Airport
- Airline service from Grand Canyon National Park Airport to Phoenix

A similar service pattern is planned with the service starting in Long Beach, California. The purposed airline service would support a multi-modal travel package for tourists to the area. Depending upon approval from the Department of Transportation, this service may start prior to the conclusion of this study.

As previously noted, the Grand Canyon National Airport Park currently has no traditional regularly scheduled commercial airline service. This is despite the fact that this airport serves an estimated 630,000 annual enplaned passengers. Currently, of these enplanements are served exclusively by charter carriers. While almost all of this market's demand for commercial airline travel relates to tourists who are coming to see the Grand Canyon, it is estimated that the market may have as many as 15,800 annual enplanements that are non-Canyon related. This estimate of annual demand was used to determine a level of scheduled commercial airline service that the Grand Canyon National Park Airport could support, in addition to its vast and varied charter airline activity.

Since charter carriers now serving the market provide a variety of services to Las Vegas, the route analysis examined the ability to this market to support airline service to Phoenix. Historically, scheduled airline service between Grand Canyon National Park Airport and Phoenix was provided. The route analysis conducted for Grand Canyon National Park Airport assumes that almost all of the air travel demand that is associated with this market will continue to be served by charter carriers in a manner similar to current service patterns. Even if service as part of a multi-modal transportation package is initiated to Phoenix by Far West Airlines, it is possible that the estimated 15,800 annual enplanements could still be available to support regularly scheduled service to Phoenix.

Results of the route analysis are present in **Table 7-23**. If scheduled commercial airline service between Grand Canyon and Phoenix were able to capture 15,800 non-Canyon related enplanements, results of the route analysis indicate that the market is capable of supporting three profitable daily round trips to Phoenix on the 19-seat Beech 1900 aircraft. This finding is of course contingent upon the ability of scheduled airline service to actually draw this level of annual demand. The probability of Grand Canyon National Park Airport being able to attract sufficient annual enplanement demand to support scheduled airline service to Phoenix will be discussed in the following chapter of this report which contains market specific recommendations.

TABLE 7-23

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS GRAND CANYON - PHOENIX
BEECH 1900

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Grand Canyon, AZ to Phoenix, AZ. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Grand Canyon, AZ's PFC = | $0 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Grand Canyon, AZ and Phoenix, AZ | 15,800 | 43 | 173 | $100 | $0.514 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 43.3 | > LDF | 57 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 21.6 | > LDF | 57 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 14.4 | 75.9% | 57 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 10.8 | 57.0% | 57 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 8.7 | 45.6% | 57 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 7.2 | 38.0% | 57 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $538 | $362 | $900 | $21 | $26 | $74 |
| BEECH 1900 | 2 | $1,076 | $725 | $1,801 | $42 | $51 | $49 |
| BEECH 1900 | 3 | $1,614 | $1,087 | $2,701 | $62 | $76 | $24 |
| BEECH 1900 | 4 | $2,153 | $1,450 | $3,603 | $83 | $101 | ($1) |
| BEECH 1900 | 5 | $2,691 | $1,812 | $4,503 | $104 | $126 | ($26) |
| BEECH 1900 | 6 | $3,229 | $2,175 | $5,404 | $125 | $151 | ($51) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $1,169,200 |
| BEECH 1900 | 2 | $774,200 |
| BEECH 1900 | 3 | $379,200 |
| BEECH 1900 | 4 | ($15,800) |
| BEECH 1900 | 5 | ($410,800) |
| BEECH 1900 | 6 | ($805,800) |

## D. Kingman

Kingman Airport currently has year-round regional/commuter service to Phoenix on America West Express. This service is provided using a 19-passenger Beech 1900 aircraft. These flights stop in Prescott en-route to Phoenix to board additional passengers. Based on historical service that has been provide to the airport and the potential passenger demand levels identified in the previous chapter, the route analyses focused first on the ability of the Kingman market to support service to Phoenix. As an alternative to Phoenix service, service to Las Vegas was also investigated. **Tables 7-24** through **7-29** present the results of the route analyses performed for the Kingman market.

Kingman's total potential demand level of 8,643 was used in the route analyses to identify an optimal level of service that could be supported to Phoenix. The route analyses indicate that one flight a day could be supported operating a 19-passenger Beech 1900 aircraft on a seven-day per week schedule. Operating the smaller 9-passenger Beech King Air aircraft on a seven-day per week schedule, two flights a day could be supported. On a six-day per week schedule, this level of potential passenger demand (8,643 annual enplanements) would be able to support two flights a day on the larger Beech 1900 and three flights a day on the 9-passenger Beech King Air. There are currently four scheduled daily departures on America West Express to Phoenix; these departures first stop in Prescott before proceeding to Phoenix. These flights are all currently flown using Beech 1900 aircraft.

Because Kingman's demand is currently combined with demand from the Prescott market to support service to the Phoenix hub, a more frequent level of service is provided than shown by the model as being feasible, solely for the Kingman market. It is also important to current service to the Kingman market is financially subsidized through the EAS program.

As a result of its geographic location, the Kingman area has a number of ties with Las Vegas. Because of these ties, a separate route analysis was conducted to determine the market's ability to support scheduled service to Las Vegas instead of Phoenix. The results of the route analysis show that with an estimated annual demand level of 8,643 enplanements, the Kingman market could support two round trips per day seven days per week to Las Vegas on either a 19-passenger Beech 1900 aircraft or a 30-passenger Embraer 120 aircraft. These results show that if there were a carrier operating smaller regional/commuter aircraft between markets in northern Arizona and Las Vegas, the Kingman market would be in a better position to support economically self-sustaining service to Las Vegas than it is to Phoenix. It is important to note, however, that while there are several carriers who now operate regional/commuter aircraft between various locations in Arizona and Phoenix, there are presently no carriers who are using these types of aircraft to provide regularly scheduled commercial airline service between smaller markets in Arizona and Las Vegas. This fact reduces the feasibility of the Kingman market actually obtaining service to Las Vegas in the near term. Actual recommendations and an action plan for the Kingman market will be discussed in the next section of this report.

TABLE 7-24

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS KINGMAN - PHOENIX
BEECH 1900 (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Kingman, AZ to Phoenix, AZ. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Kingman, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Kingman, AZ and Phoenix, AZ | 8,643 | 24 | 160 | $80 | $0.424 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 23.7 | > LDF | 54 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 11.8 | 62.3% | 54 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 7.9 | 41.5% | 54 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 5.9 | 31.2% | 54 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 4.7 | 24.9% | 54 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 3.9 | 20.8% | 54 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $455 | $306 | $761 | $32 | $43 | $37 |
| BEECH 1900 | 2 | $909 | $613 | $1,522 | $64 | $81 | ($1) |
| BEECH 1900 | 3 | $1,364 | $919 | $2,283 | $96 | $120 | ($40) |
| BEECH 1900 | 4 | $1,819 | $1,225 | $3,044 | $129 | $158 | ($78) |
| BEECH 1900 | 5 | $2,273 | $1,531 | $3,804 | $161 | $197 | ($117) |
| BEECH 1900 | 6 | $2,728 | $1,838 | $4,566 | $193 | $235 | ($155) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $319,791 |
| BEECH 1900 | 2 | ($8,643) |
| BEECH 1900 | 3 | ($345,720) |
| BEECH 1900 | 4 | ($674,154) |
| BEECH 1900 | 5 | ($1,011,231) |
| BEECH 1900 | 6 | ($1,339,665) |

TABLE 7-25

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS KINGMAN - PHOENIX
BEECH KING AIR (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Kingman, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Kingman, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Kingman, AZ and Phoenix, AZ | 8,643 | 24 | 160 | $80 | $0.424 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 23.7 | > LDF | 54 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 11.8 | > LDF | 54 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 7.9 | 87.7% | 54 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 5.9 | 65.8% | 54 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 4.7 | 52.6% | 54 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 3.9 | 43.9% | 54 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $305 | $206 | $511 | $22 | $30 | $50 |
| BEECH KING AIR | 2 | $610 | $411 | $1,021 | $43 | $56 | $24 |
| BEECH KING AIR | 3 | $916 | $617 | $1,533 | $65 | $82 | ($2) |
| BEECH KING AIR | 4 | $1,221 | $822 | $2,043 | $86 | $107 | ($27) |
| BEECH KING AIR | 5 | $1,526 | $1,028 | $2,554 | $108 | $133 | ($53) |
| BEECH KING AIR | 6 | $1,831 | $1,233 | $3,064 | $129 | $159 | ($79) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $432,150 |
| BEECH KING AIR | 2 | $207,432 |
| BEECH KING AIR | 3 | ($17,286) |
| BEECH KING AIR | 4 | ($233,361) |
| BEECH KING AIR | 5 | ($458,079) |
| BEECH KING AIR | 6 | ($682,797) |

TABLE 7-26

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS KINGMAN - PHOENIX
BEECH 1900 (6-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Kingman, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 6 Days per Week Schedule | |
| **PFCs:** | Kingman, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Kingman, AZ and Phoenix, AZ | 8,643 | 28 | 160 | $80 | $0.424 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 27.7 | > LDF | 54 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 13.9 | 72.9% | 54 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 9.2 | 48.6% | 54 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 6.9 | 36.4% | 54 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 5.5 | 29.2% | 54 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 4.6 | 24.3% | 54 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $455 | $306 | $761 | $27 | $37 | $43 |
| BEECH 1900 | 2 | $909 | $613 | $1,522 | $55 | $70 | $10 |
| BEECH 1900 | 3 | $1,364 | $919 | $2,283 | $82 | $103 | ($23) |
| BEECH 1900 | 4 | $1,819 | $1,225 | $3,044 | $110 | $136 | ($56) |
| BEECH 1900 | 5 | $2,273 | $1,531 | $3,804 | $137 | $169 | ($89) |
| BEECH 1900 | 6 | $2,728 | $1,838 | $4,566 | $165 | $202 | ($122) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $371,649 |
| BEECH 1900 | 2 | $86,430 |
| BEECH 1900 | 3 | ($198,789) |
| BEECH 1900 | 4 | ($484,008) |
| BEECH 1900 | 5 | ($769,227) |
| BEECH 1900 | 6 | ($1,054,446) |

TABLE 7-27

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS KINGMAN - PHOENIX
BEECH KING AIR (6-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Kingman, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 6 Days per Week Schedule | |
| **PFCs:** | Kingman, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Kingman, AZ and Phoenix, AZ | 8,643 | 28 | 160 | $80 | $0.424 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 27.7 | > LDF | 54 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 13.9 | > LDF | 54 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 9.2 | > LDF | 54 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 6.9 | 76.9% | 54 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 5.5 | 61.6% | 54 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 4.6 | 51.3% | 54 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $305 | $206 | $511 | $18 | $26 | $54 |
| BEECH KING AIR | 2 | $610 | $411 | $1,021 | $37 | $48 | $32 |
| BEECH KING AIR | 3 | $916 | $617 | $1,533 | $55 | $70 | $10 |
| BEECH KING AIR | 4 | $1,221 | $822 | $2,043 | $74 | $92 | ($12) |
| BEECH KING AIR | 5 | $1,526 | $1,028 | $2,554 | $92 | $115 | ($35) |
| BEECH KING AIR | 6 | $1,831 | $1,233 | $3,064 | $111 | $137 | ($57) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $466,722 |
| BEECH KING AIR | 2 | $276,576 |
| BEECH KING AIR | 3 | $86,430 |
| BEECH KING AIR | 4 | ($103,716) |
| BEECH KING AIR | 5 | ($302,505) |
| BEECH KING AIR | 6 | ($492,651) |

TABLE 7-28

**Arizona Department of Transportation**
**Air Service Analysis**

**ROUTE ANALYSIS KINGMAN - LAS VEGAS**
**BEECH 1900 (7-DAY SCHEDULE)**

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Kingman, AZ to Las Vegas, NV. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Kingman, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | Market Rev Potential SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Kingman, AZ and Las Vegas, NV | 8,643 | 24 | 96 | $80 | $0.707 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 23.7 | > LDF | 37 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 11.8 | 62.3% | 37 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 7.9 | 41.5% | 37 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 5.9 | 31.2% | 37 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 4.7 | 24.9% | 37 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 3.9 | 20.8% | 37 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $351 | $237 | $588 | $25 | $34 | $46 |
| BEECH 1900 | 2 | $702 | $473 | $1,175 | $50 | $64 | $16 |
| BEECH 1900 | 3 | $1,053 | $710 | $1,763 | $74 | $93 | ($13) |
| BEECH 1900 | 4 | $1,404 | $946 | $2,350 | $99 | $123 | ($43) |
| BEECH 1900 | 5 | $1,756 | $1,183 | $2,939 | $124 | $153 | ($73) |
| BEECH 1900 | 6 | $2,107 | $1,419 | $3,526 | $149 | $183 | ($103) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $397,578 |
| BEECH 1900 | 2 | $138,288 |
| BEECH 1900 | 3 | ($112,359) |
| BEECH 1900 | 4 | ($371,649) |
| BEECH 1900 | 5 | ($630,939) |
| BEECH 1900 | 6 | ($890,229) |

TABLE 7-29

Arizona Department of Transportation
Air Service Analysis

## ROUTE ANALYSIS KINGMAN - LAS VEGAS
## EMBRAER 120 (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Kingman, AZ to Las Vegas, NV. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Kingman, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Kingman, AZ and Las Vegas, NV | 8,643 | 24 | 96 | $80 | $0.707 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | 30 | 23.7 | 78.9% | 34 | 0% | 0% |
| EMBRAER 120 | 2 | 30 | 11.8 | 39.5% | 34 | 0% | 0% |
| EMBRAER 120 | 3 | 30 | 7.9 | 26.3% | 34 | 0% | 0% |
| EMBRAER 120 | 4 | 30 | 5.9 | 19.7% | 34 | 0% | 0% |
| EMBRAER 120 | 5 | 30 | 4.7 | 15.8% | 34 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 3.9 | 13.2% | 34 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | $387 | $261 | $648 | $27 | $37 | $43 |
| EMBRAER 120 | 2 | $775 | $522 | $1,297 | $55 | $70 | $10 |
| EMBRAER 120 | 3 | $1,162 | $783 | $1,945 | $82 | $102 | ($22) |
| EMBRAER 120 | 4 | $1,549 | $1,043 | $2,592 | $109 | $135 | ($55) |
| EMBRAER 120 | 5 | $1,936 | $1,304 | $3,240 | $137 | $168 | ($88) |
| EMBRAER 120 | 6 | $2,324 | $1,565 | $3,889 | $164 | $201 | ($121) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 1 | $371,649 |
| EMBRAER 120 | 2 | $86,430 |
| EMBRAER 120 | 3 | ($190,146) |
| EMBRAER 120 | 4 | ($475,365) |
| EMBRAER 120 | 5 | ($760,584) |
| EMBRAER 120 | 6 | ($1,045,803) |

## E. Lake Havasu City

Lake Havasu City Municipal Airport has year-round regional/commuter service to Phoenix. This service is provided by America West Express, operating 19-passenger Beech 1900 aircraft.

In previous analyses, Lake Havasu City was categorized as an intermediate community. Intermediate communities were noted to have a level of potential demand high enough to support service to one hub, and possibly high enough to support service to two hubs, depending on the community's location and on other circumstances in the community. For the majority of the intermediate markets, the second hub that was evaluated for potential service was Las Vegas. For a community such as Lake Havasu City, there are strong economic ties to Las Vegas, due to the proximity of the two cities. Therefore, the hub assignment process and route analyses focused on the ability of the Lake Havasu City market to support service to Las Vegas and/or Phoenix. **Tables 7-30** through **7-36** present the results of the route analyses performed for Lake Havasu City to these two hubs.

The route analysis was conducted using three scenarios. The first scenario considers service to both Las Vegas and Phoenix. The second scenario considers service to just Phoenix, while the third considers service to just Las Vegas. Potential passenger demand numbers assigned to each of these three scenarios vary accordingly. The results of the route analyses are discussed in the following sections:

- Las Vegas - Many carriers provide a high level of service from Las Vegas, with America West and Southwest providing the highest number of daily scheduled flights. No single carrier operates a true connecting hub from this airport. Therefore, this analysis is based on assumptions related to aircraft that might be used by a potential regional/commuter carrier to provide scheduled commercial airline service between these two markets. A scenario of service only to Las Vegas was first evaluated. Under this scenario, the full potential demand level of 24,619 annual enplanement was used in the route analysis model to determine the level of service that could be supported between Lake Havasu City and Las Vegas. With this level of potential annual enplanements, five flights a day would be financially feasible on the 30-passenger Embraer 120 aircraft, and six flights a day would appear to be possible using the 19-passenger Beech 1900. A seven-day per week schedule was used to evaluate each of these aircraft.

TABLE 7-30

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS LAKE HAVASU CITY - LAS VEGAS
EMBRAER 120 (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Lake Havasu City, AZ to Las Vegas, NV. | |
| | (Low Competition Market) | |
| Schedule: | 7 Days per Week Schedule | |
| PFCs: | Lake Havasu City, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Las Vegas, NV | 24,619 | 67 | 128 | $75 | $0.495 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | 30 | 67.4 | > LDF | 41 | 0% | 0% |
| EMBRAER 120 | 2 | 30 | 33.7 | > LDF | 41 | 0% | 0% |
| EMBRAER 120 | 3 | 30 | 22.5 | 74.9% | 41 | 0% | 0% |
| EMBRAER 120 | 4 | 30 | 16.9 | 56.2% | 41 | 0% | 0% |
| EMBRAER 120 | 5 | 30 | 13.5 | 45.0% | 41 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 11.2 | 37.5% | 41 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | $468 | $315 | $783 | $12 | $18 | $57 |
| EMBRAER 120 | 2 | $936 | $631 | $1,567 | $23 | $32 | $43 |
| EMBRAER 120 | 3 | $1,405 | $946 | $2,351 | $35 | $46 | $29 |
| EMBRAER 120 | 4 | $1,873 | $1,262 | $3,135 | $46 | $60 | $15 |
| EMBRAER 120 | 5 | $2,341 | $1,577 | $3,918 | $58 | $74 | $1 |
| EMBRAER 120 | 6 | $2,809 | $1,892 | $4,701 | $70 | $88 | ($13) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 1 | $1,403,283 |
| EMBRAER 120 | 2 | $1,058,617 |
| EMBRAER 120 | 3 | $713,951 |
| EMBRAER 120 | 4 | $369,285 |
| EMBRAER 120 | 5 | $24,619 |
| EMBRAER 120 | 6 | ($320,047) |

TABLE 7-31

Arizona Department of Transportation
Air Service Analysis

## ROUTE ANALYSIS LAKE HAVASU CITY - LAS VEGAS
## BEECH 1900 (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Lake Havasu City, AZ to Las Vegas, NV. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Lake Havasu City, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Las Vegas, NV | 24,619 | 67 | 128 | $75 | $0.495 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 67.4 | > LDF | 45 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 33.7 | > LDF | 45 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 22.5 | > LDF | 45 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 16.9 | 88.7% | 45 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 13.5 | 71.0% | 45 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 11.2 | 59.2% | 45 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $385 | $259 | $644 | $10 | $15 | $60 |
| BEECH 1900 | 2 | $770 | $519 | $1,289 | $19 | $27 | $48 |
| BEECH 1900 | 3 | $1,155 | $778 | $1,933 | $29 | $38 | $37 |
| BEECH 1900 | 4 | $1,540 | $1,037 | $2,577 | $38 | $50 | $25 |
| BEECH 1900 | 5 | $1,925 | $1,296 | $3,221 | $48 | $61 | $14 |
| BEECH 1900 | 6 | $2,309 | $1,556 | $3,865 | $57 | $73 | $2 |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $1,477,140 |
| BEECH 1900 | 2 | $1,181,712 |
| BEECH 1900 | 3 | $910,903 |
| BEECH 1900 | 4 | $615,475 |
| BEECH 1900 | 5 | $344,666 |
| BEECH 1900 | 6 | $49,238 |

TABLE 7-32

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS LAKE HAVASU CITY - PHOENIX
DASH-8-200B (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Lake Havasu City, AZ to Phoenix, AZ. (Low Competition Market) | |
| Schedule: | 7 Days per Week Schedule | |
| PFCs: | Lake Havasu City, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Phoenix, AZ | 24,619 | 67 | 145 | $80 | $0.468 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 1 | 37 | 67.4 | > LDF | 46 | 0% | 0% |
| DASH-8-200B | 2 | 37 | 33.7 | 91.1% | 46 | 0% | 0% |
| DASH-8-200B | 3 | 37 | 22.5 | 60.8% | 46 | 0% | 0% |
| DASH-8-200B | 4 | 37 | 16.9 | 45.6% | 46 | 0% | 0% |
| DASH-8-200B | 5 | 37 | 13.5 | 36.5% | 46 | 0% | 0% |
| DASH-8-200B | 6 | 37 | 11.2 | 30.4% | 46 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 1 | $611 | $412 | $1,023 | $15 | $22 | $58 |
| DASH-8-200B | 2 | $1,222 | $823 | $2,045 | $30 | $40 | $40 |
| DASH-8-200B | 3 | $1,833 | $1,235 | $3,068 | $45 | $59 | $21 |
| DASH-8-200B | 4 | $2,445 | $1,647 | $4,092 | $61 | $77 | $3 |
| DASH-8-200B | 5 | $3,056 | $2,058 | $5,114 | $76 | $95 | ($15) |
| DASH-8-200B | 6 | $3,667 | $2,470 | $6,137 | $91 | $113 | ($33) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 1 | $1,427,902 |
| DASH-8-200B | 2 | $984,760 |
| DASH-8-200B | 3 | $516,999 |
| DASH-8-200B | 4 | $73,857 |
| DASH-8-200B | 5 | ($369,285) |
| DASH-8-200B | 6 | ($812,427) |

TABLE 7-33
Arizona Department of Transportation
Air Service Analysis

## ROUTE ANALYSIS LAKE HAVASU CITY - PHOENIX
## BEECH 1900 (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Lake Havasu City, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| Schedule: | 7 Days per Week Schedule | |
| PFCs: | Lake Havasu City, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Phoenix, AZ | 24,619 | 67 | 145 | $80 | $0.468 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 67.4 | > LDF | 50 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 33.7 | > LDF | 50 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 22.5 | > LDF | 50 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 16.9 | 88.7% | 50 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 13.5 | 71.0% | 50 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 11.2 | 59.2% | 50 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $422 | $284 | $706 | $10 | $17 | $63 |
| BEECH 1900 | 2 | $844 | $568 | $1,412 | $21 | $29 | $51 |
| BEECH 1900 | 3 | $1,266 | $853 | $2,119 | $31 | $42 | $38 |
| BEECH 1900 | 4 | $1,688 | $1,137 | $2,825 | $42 | $54 | $26 |
| BEECH 1900 | 5 | $2,110 | $1,421 | $3,531 | $52 | $67 | $13 |
| BEECH 1900 | 6 | $2,532 | $1,705 | $4,237 | $63 | $79 | $1 |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $1,550,997 |
| BEECH 1900 | 2 | $1,255,569 |
| BEECH 1900 | 3 | $935,522 |
| BEECH 1900 | 4 | $640,094 |
| BEECH 1900 | 5 | $320,047 |
| BEECH 1900 | 6 | $24,619 |

TABLE 7-34

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS LAKE HAVASU CITY - LAS VEGAS
EMBRAER 120 (TWO-HUB SCENARIO)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Lake Havasu City, AZ to Las Vegas, NV. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Lake Havasu City, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Las Vegas, NV | 7,210 | 20 | 128 | $75 | $0.495 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | 30 | 19.8 | 65.8% | 41 | 0% | 0% |
| EMBRAER 120 | 2 | 30 | 9.9 | 32.9% | 41 | 0% | 0% |
| EMBRAER 120 | 3 | 30 | 6.6 | 21.9% | 41 | 0% | 0% |
| EMBRAER 120 | 4 | 30 | 4.9 | 16.5% | 41 | 0% | 0% |
| EMBRAER 120 | 5 | 30 | 4.0 | 13.2% | 41 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 3.3 | 11.0% | 41 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | $468 | $315 | $783 | $40 | $52 | $23 |
| EMBRAER 120 | 2 | $936 | $631 | $1,567 | $79 | $99 | ($24) |
| EMBRAER 120 | 3 | $1,405 | $946 | $2,351 | $119 | $147 | ($72) |
| EMBRAER 120 | 4 | $1,873 | $1,262 | $3,135 | $159 | $194 | ($119) |
| EMBRAER 120 | 5 | $2,341 | $1,577 | $3,918 | $198 | $242 | ($167) |
| EMBRAER 120 | 6 | $2,809 | $1,892 | $4,701 | $238 | $289 | ($214) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 1 | $165,830 |
| EMBRAER 120 | 2 | ($173,040) |
| EMBRAER 120 | 3 | ($519,120) |
| EMBRAER 120 | 4 | ($857,990) |
| EMBRAER 120 | 5 | ($1,204,070) |
| EMBRAER 120 | 6 | ($1,542,940) |

TABLE 7-35

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS LAKE HAVASU CITY - LAS VEGAS
BEECH 1900 (TWO-HUB SCENARIO)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Lake Havasu City, AZ to Las Vegas, NV. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Lake Havasu City, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Las Vegas, NV | 7,210 | 20 | 128 | $75 | $0.495 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 19.8 | > LDF | 45 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 9.9 | 52.0% | 45 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 6.6 | 34.7% | 45 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 4.9 | 26.0% | 45 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 4.0 | 20.8% | 45 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 3.3 | 17.3% | 45 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $385 | $259 | $644 | $33 | $43 | $32 |
| BEECH 1900 | 2 | $770 | $519 | $1,289 | $65 | $82 | ($7) |
| BEECH 1900 | 3 | $1,155 | $778 | $1,933 | $98 | $121 | ($46) |
| BEECH 1900 | 4 | $1,540 | $1,037 | $2,577 | $130 | $160 | ($85) |
| BEECH 1900 | 5 | $1,925 | $1,296 | $3,221 | $163 | $199 | ($124) |
| BEECH 1900 | 6 | $2,309 | $1,556 | $3,865 | $196 | $239 | ($164) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $230,720 |
| BEECH 1900 | 2 | ($50,470) |
| BEECH 1900 | 3 | ($331,660) |
| BEECH 1900 | 4 | ($612,850) |
| BEECH 1900 | 5 | ($894,040) |
| BEECH 1900 | 6 | ($1,182,440) |

TABLE 7-36

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS LAKE HAVASU CITY - PHOENIX
BEECH 1900 (TWO-HUB SCENARIO)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Lake Havasu City, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Lake Havasu City, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | Market Rev Potential SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Lake Havasu City, AZ and Phoenix, AZ | 17,409 | 48 | 145 | $80 | $0.468 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 47.7 | > LDF | 50 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 23.8 | > LDF | 50 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 15.9 | 83.7% | 50 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 11.9 | 62.8% | 50 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 9.5 | 50.2% | 50 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 7.9 | 41.8% | 50 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $422 | $284 | $706 | $15 | $22 | $58 |
| BEECH 1900 | 2 | $844 | $568 | $1,412 | $30 | $40 | $40 |
| BEECH 1900 | 3 | $1,266 | $853 | $2,119 | $44 | $57 | $23 |
| BEECH 1900 | 4 | $1,688 | $1,137 | $2,825 | $59 | $75 | $5 |
| BEECH 1900 | 5 | $2,110 | $1,421 | $3,531 | $74 | $93 | ($13) |
| BEECH 1900 | 6 | $2,532 | $1,705 | $4,237 | $89 | $111 | ($31) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $1,009,722 |
| BEECH 1900 | 2 | $696,360 |
| BEECH 1900 | 3 | $400,407 |
| BEECH 1900 | 4 | $87,045 |
| BEECH 1900 | 5 | ($226,317) |
| BEECH 1900 | 6 | ($539,679) |

- Phoenix - Service to Phoenix is currently provided from Lake Havasu City by America West Express on a year-round basis using the Beech 1900 aircraft. The hub assignment process showed that Phoenix has the ability to capture the highest percentage of this market's total potential passenger demand at approximately 90 percent. Similar to Las Vegas, a scenario that examined the optimum level of service to and from Phoenix-only service was evaluated. Under this scenario, the full potential demand estimate of 24,619 was used in the modeling process. With this level of potential demand, operating a 37-passenger Dash-8-200B, four flights a day would be financially feasible, assuming a seven-day per week schedule.

- Two-Hub Scenario - Due to the proximity to Las Vegas and comments received from the community, a two-hub scenario was also evaluated for the Lake Havasu City market. The two-hub scenario examined the ability of the market to support service to both Phoenix and Las Vegas using regional/commuter aircraft. If service were provided to both Las Vegas and Phoenix, it was assumed that Las Vegas would be able to capture approximately 7,210 annual enplanements. This number is based on the assumption that Las Vegas would capture passengers from this market traveling to California, Colorado, Oregon, Utah, and Washington. Using this level of potential demand and a seven-day per week schedule, the route analysis determined that one flight per day would be financially feasible if an Embraer120 or Beech 1900 were operated. If service were provided to both Las Vegas and Phoenix, potential demand to Phoenix was estimated at 17,409. This estimate was developed by taking the total number of potential enplanements for Lake Havasu City (24,619), minus the number of enplanement that were assigned to Las Vegas (7,210). If service were provided to Las Vegas and Phoenix, passenger demand to Phoenix would be able to support four flights a day on a 19-passenger Beech 1900 aircraft with a seven-day per week schedule.

Overall, the route analysis showed that Lake Havasu City's potential demand level can support a total of five or six flights a day. There are currently four scheduled daily departures on America West Express to Phoenix. These flights all currently consist of Beech 1900 aircraft. While this level of service is theoretically possible for the Lake Havasu City market, actually obtaining and supporting new and existing service in this market will be impacted by several factors. These factors and a marketing strategy for Lake Havasu City will be discussed in the following chapter.

## F. Page

Page Municipal Airport had year-round regional/commuter service on Scenic Airlines, a code-sharing partner with Delta Air Lines, to Phoenix. This service was provided using 19-passenger Beech 1900 aircraft. However, Sunrise Airlines, a non-code sharing carrier, recently replaced Scenic in the Page market. The hub assignment process and route analyses focused on the ability of this market to support service to both Las Vegas and Phoenix, or

Phoenix alone. **Tables 7-37** through **7-40** present the results of the route analyses performed for Page for the two service scenarios. The results of the route analyses for Page are discussed in the following sections:

- Phoenix - As discussed in the hub assignment process, Phoenix has the ability to capture the highest percentage of Page's total potential passenger demand at 94 percent. With service only to Phoenix, all of the total potential demand (34,626) was allocated to Phoenix to evaluate the level of service that could be supported. According to the results of the route analysis model, this potential demand level would support six flights a day on a 37-passenger Dash-8-200B with a seven-day per week schedule. Using the smaller Beech 1900 aircraft, eight flights a day could be supported on a seven-day per week schedule.

- Two-Hub Scenario - Due to the proximity to Las Vegas and comments received from the community, a two-hub scenario was also evaluated for the Page market. The two-hub scenario examined the ability of the market to support service to both Phoenix and Las Vegas using regional/commuter aircraft. It is anticipated in the analysis that service to Las Vegas would primarily be used to serve demand destined for locations in California and Washington; this resulted in a total of 17,313 potential enplanements to the Las Vegas hub. Destinations in California currently attract the highest level of demand from the Page market. To determine Phoenix's potential demand level, if service were provided to both Las Vegas and Phoenix, Las Vegas's potential demand assignment (17,313) was subtracted from the market's total potential demand (34,626). Coincidentally, this means that from the Page market, half of the total potential annual enplanements would use service to Las Vegas, and half (17,313) would use service to Phoenix. Based on this level of demand and operating the 30-passenger Embraer 120 on a seven-day per week schedule, three flights a day would be viable between Page and Las Vegas. If service were provided to both Las Vegas and Phoenix, the route analysis indicated that four flights a day to Phoenix would be financially feasible, operating a Beech 1900 aircraft on a seven-day per week schedule. Overall, under a two-hub scenario, seven departures per day could be supported from Page.

The route analysis showed that Page's potential demand level might support a total of up to eight flights a day. With service just to Phoenix, six flights a day could be supported using the larger Dash-8 aircraft, while eight flights a day to just Phoenix could be supported by operating the Beech 1900 aircraft. Under the two-hub scenario, seven departures could be supported per day, three to Las Vegas using the Embraer 120 (30 seats) and four per day using the Beech 1900 (19 seats) to Phoenix.

TABLE 7-37

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PAGE - PHOENIX
DASH-8-200B (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Page, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Page, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | Market Rev Potential SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Page, AZ and Phoenix, AZ | 34,626 | 95 | 234 | $120 | $0.447 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 2 | 37 | 47.4 | > LDF | 67 | 0% | 0% |
| DASH-8-200B | 3 | 37 | 31.6 | 85.5% | 67 | 0% | 0% |
| DASH-8-200B | 4 | 37 | 23.7 | 64.1% | 67 | 0% | 0% |
| DASH-8-200B | 5 | 37 | 19.0 | 51.3% | 67 | 0% | 0% |
| DASH-8-200B | 6 | 37 | 15.8 | 42.7% | 67 | 0% | 0% |
| DASH-8-200B | 7 | 37 | 13.6 | 36.6% | 67 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 2 | $1,770 | $1,193 | $2,963 | $31 | $41 | $79 |
| DASH-8-200B | 3 | $2,656 | $1,789 | $4,445 | $47 | $60 | $60 |
| DASH-8-200B | 4 | $3,541 | $2,385 | $5,926 | $62 | $79 | $41 |
| DASH-8-200B | 5 | $4,426 | $2,981 | $7,407 | $78 | $98 | $22 |
| DASH-8-200B | 6 | $5,311 | $3,578 | $8,889 | $94 | $116 | $4 |
| DASH-8-200B | 7 | $6,197 | $4,174 | $10,371 | $109 | $135 | ($15) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 2 | $2,735,454 |
| DASH-8-200B | 3 | $2,077,560 |
| DASH-8-200B | 4 | $1,419,666 |
| DASH-8-200B | 5 | $761,772 |
| DASH-8-200B | 6 | $138,504 |
| DASH-8-200B | 7 | ($519,390) |

TABLE 7-38

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PAGE - PHOENIX
BEECH 1900 (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Page, AZ to Phoenix, AZ. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Page, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Page, AZ and Phoenix, AZ | 34,626 | 95 | 234 | $120 | $0.447 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 4 | 19 | 23.7 | > LDF | 73 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 19.0 | 99.9% | 73 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 15.8 | 83.2% | 73 | 0% | 0% |
| BEECH 1900 | 7 | 19 | 13.6 | 71.3% | 73 | 0% | 0% |
| BEECH 1900 | 8 | 19 | 11.9 | 62.4% | 73 | 0% | 0% |
| BEECH 1900 | 9 | 19 | 10.5 | 55.5% | 73 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 4 | $2,464 | $1,660 | $4,124 | $43 | $56 | $64 |
| BEECH 1900 | 5 | $3,080 | $2,075 | $5,155 | $54 | $69 | $51 |
| BEECH 1900 | 6 | $3,696 | $2,490 | $6,186 | $65 | $82 | $38 |
| BEECH 1900 | 7 | $4,312 | $2,905 | $7,217 | $76 | $95 | $25 |
| BEECH 1900 | 8 | $4,928 | $3,319 | $8,247 | $87 | $108 | $12 |
| BEECH 1900 | 9 | $5,544 | $3,734 | $9,278 | $98 | $121 | ($1) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 4 | $2,216,064 |
| BEECH 1900 | 5 | $1,765,926 |
| BEECH 1900 | 6 | $1,315,788 |
| BEECH 1900 | 7 | $865,650 |
| BEECH 1900 | 8 | $415,512 |
| BEECH 1900 | 9 | ($34,626) |

TABLE 7-39

## Arizona Department of Transportation
## Air Service Analysis

## ROUTE ANALYSIS PAGE - LAS VEGAS
## EMBRAER 120 (TWO-HUB SCENARIO)

***AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY***

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Page, AZ to Las Vegas, NV. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Page, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Page, AZ and Las Vegas, NV | 17,313 | 47 | 215 | $120 | $0.486 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | 30 | 47.4 | > LDF | 60 | 0% | 0% |
| EMBRAER 120 | 2 | 30 | 23.7 | 79.1% | 60 | 0% | 0% |
| EMBRAER 120 | 3 | 30 | 15.8 | 52.7% | 60 | 0% | 0% |
| EMBRAER 120 | 4 | 30 | 11.9 | 39.5% | 60 | 0% | 0% |
| EMBRAER 120 | 5 | 30 | 9.5 | 31.6% | 60 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 7.9 | 26.4% | 60 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 1 | $688 | $464 | $1,152 | $24 | $33 | $87 |
| EMBRAER 120 | 2 | $1,377 | $927 | $2,304 | $49 | $62 | $58 |
| EMBRAER 120 | 3 | $2,065 | $1,391 | $3,456 | $73 | $91 | $29 |
| EMBRAER 120 | 4 | $2,753 | $1,855 | $4,608 | $97 | $120 | $0 |
| EMBRAER 120 | 5 | $3,442 | $2,318 | $5,760 | $121 | $150 | ($30) |
| EMBRAER 120 | 6 | $4,130 | $2,782 | $6,912 | $146 | $179 | ($59) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 1 | $1,506,231 |
| EMBRAER 120 | 2 | $1,004,154 |
| EMBRAER 120 | 3 | $502,077 |
| EMBRAER 120 | 4 | $0 |
| EMBRAER 120 | 5 | ($519,390) |
| EMBRAER 120 | 6 | ($1,021,467) |

TABLE 7-40

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PAGE - PHOENIX
BEECH 1900 (TWO-HUB SCENARIO)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Page, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Page, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential | |
|---|---|---|---|---|---|
| | Annual | Daily | Length | SIFL 1-Way Fare | SIFL Yield /CPM |
| Between Page, AZ and Phoenix, AZ | 17,313 | 47 | 234 | $120 | $0.447 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 47.4 | > LDF | 73 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 23.7 | > LDF | 73 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 15.8 | 83.2% | 73 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 11.9 | 62.4% | 73 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 9.5 | 49.9% | 73 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 7.9 | 41.6% | 73 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs | | | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| | | Direct | Other | Total | | | |
| BEECH 1900 | 1 | $616 | $415 | $1,031 | $22 | $30 | $90 |
| BEECH 1900 | 2 | $1,232 | $830 | $2,062 | $43 | $56 | $64 |
| BEECH 1900 | 3 | $1,848 | $1,245 | $3,093 | $65 | $82 | $38 |
| BEECH 1900 | 4 | $2,464 | $1,660 | $4,124 | $87 | $108 | $12 |
| BEECH 1900 | 5 | $3,080 | $2,075 | $5,155 | $109 | $134 | ($14) |
| BEECH 1900 | 6 | $3,696 | $2,490 | $6,186 | $130 | $160 | ($40) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EECH 1900 | 1 | $1,558,170 |
| EECH 1900 | 2 | $1,108,032 |
| BEECH 1900 | 3 | $657,894 |
| BEECH 1900 | 4 | $207,756 |
| BEECH 1900 | 5 | ($242,382) |
| BEECH 1900 | 6 | ($692,520) |

While this level of service is theoretically possible for the Page market, actually obtaining and supporting new and existing service in this market will be impacted by several factors, many of which will be addressed in the following chapter. Marketing strategies for attracting new or improved service for Page will be discussed in a subsequent chapter.

## G. Prescott

Ernest A. Love Field currently has year-round regional/commuter service on America West to Phoenix. This service is provided with 19-passenger Beech 1900 aircraft. The aircraft currently starts at Kingman, stops at Prescott, and proceeds to Phoenix. Based on historical service that has been provided to the airport, potential demand levels identified in the previous chapter and the hub assignment process, the route analyses for Prescott focused on the airport's ability to support service to Las Vegas and/or Phoenix. **Tables 7-41** through **Table 7-44** present the results of the route analyses performed for Prescott to both hubs. The results of the route analyses for Prescott are discussed in the following sections:

- Phoenix - Service to Phoenix is currently provided from Prescott by America West Express on a year-round basis using the Beech 1900 aircraft. Through the hub assignment process, Phoenix was noted to have the ability to capture the highest percentage of this market's total potential passenger demand at over 92 percent. With service only to Phoenix, all of the total potential demand (19,130) was allocated to Phoenix to evaluate the level of service that could be supported with this level of demand. This potential enplanement demand level would support four flights a day using the 37-passenger Dash-8-200B on a seven-day per week schedule. Operating the smaller 19-passenger Beech 1900 aircraft, six flights a day could be supported on a seven-day per week schedule.

- Two-Hub Scenario - Due to the proximity to Las Vegas and the airport's inclusion as an intermediate market, a two-hub scenario was evaluated for the Prescott market. The two-hub scenario examined the ability of the market to support service to both Phoenix and Las Vegas using regional/commuter aircraft. It is anticipated that service to Las Vegas would primarily be used to serve demand destined for the markets along the West Coast. Destinations in California currently attract the highest level of passenger demand from the Prescott market. To evaluate the feasibility of service to Las Vegas, demand destined for cities within California, Nevada, and Oregon were used in the route analysis, resulting a potential enplanement level of 9,843. Based on this level of demand, two flights a day could be supported between Prescott and Las Vegas, operating a 19-passenger Beech 1900 on a seven-day per week schedule. To determine Phoenix's potential demand level, if service were provided to both Las Vegas and Phoenix, the potential passenger demand level allocated to Las Vegas (9,843) was subtracted from the total potential demand level for the Prescott market (19,130), leaving 9,287 potential enplanements to support Phoenix service. With service to both Las Vegas and Phoenix, Phoenix could

TABLE 7-41

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PRESCOTT - PHOENIX
DASH-8-200B (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Prescott, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| Schedule: | 7 Days per Week Schedule | |
| PFCs: | Prescott, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Prescott, AZ and Phoenix, AZ | 19,130 | 52 | 74 | $75 | $0.855 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 1 | 37 | 52.4 | > LDF | 30 | 0% | 0% |
| DASH-8-200B | 2 | 37 | 26.2 | 70.8% | 30 | 0% | 0% |
| DASH-8-200B | 3 | 37 | 17.5 | 47.2% | 30 | 0% | 0% |
| DASH-8-200B | 4 | 37 | 13.1 | 35.4% | 30 | 0% | 0% |
| DASH-8-200B | 5 | 37 | 10.5 | 28.3% | 30 | 0% | 0% |
| DASH-8-200B | 6 | 37 | 8.7 | 23.6% | 30 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 1 | $392 | $264 | $656 | $13 | $19 | $56 |
| DASH-8-200B | 2 | $785 | $529 | $1,314 | $25 | $34 | $41 |
| DASH-8-200B | 3 | $1,177 | $793 | $1,970 | $38 | $49 | $26 |
| DASH-8-200B | 4 | $1,570 | $1,057 | $2,627 | $50 | $64 | $11 |
| DASH-8-200B | 5 | $1,962 | $1,322 | $3,284 | $63 | $79 | ($4) |
| DASH-8-200B | 6 | $2,355 | $1,586 | $3,941 | $75 | $94 | ($19) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 1 | $1,071,280 |
| DASH-8-200B | 2 | $784,330 |
| DASH-8-200B | 3 | $497,380 |
| DASH-8-200B | 4 | $210,430 |
| DASH-8-200B | 5 | ($76,520) |
| DASH-8-200B | 6 | ($363,470) |

TABLE 7-42

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PRESCOTT - PHOENIX
BEECH 1900 (ALL DEMAND)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Prescott, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Prescott, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Prescott, AZ and Phoenix, AZ | 19,130 | 52 | 74 | $75 | $0.855 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OEF) | Aircraft Erosion (OEF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 2 | 19 | 26.2 | > LDF | 32 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 17.5 | 91.9% | 32 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 13.1 | 69.0% | 32 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 10.5 | 55.2% | 32 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 8.7 | 46.0% | 32 | 0% | 0% |
| BEECH 1900 | 7 | 19 | 7.5 | 39.4% | 32 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 2 | $534 | $360 | $894 | $17 | $24 | $51 |
| BEECH 1900 | 3 | $802 | $540 | $1,342 | $26 | $35 | $40 |
| BEECH 1900 | 4 | $1,069 | $720 | $1,789 | $34 | $45 | $30 |
| BEECH 1900 | 5 | $1,336 | $900 | $2,236 | $43 | $55 | $20 |
| BEECH 1900 | 6 | $1,603 | $1,080 | $2,683 | $51 | $65 | $10 |
| BEECH 1900 | 7 | $1,870 | $1,260 | $3,130 | $60 | $76 | ($1) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 2 | $975,630 |
| BEECH 1900 | 3 | $765,200 |
| BEECH 1900 | 4 | $573,900 |
| BEECH 1900 | 5 | $382,600 |
| BEECH 1900 | 6 | $191,300 |
| BEECH 1900 | 7 | ($19,130) |

TABLE 7-43

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PRESCOTT - LAS VEGAS
BEECH 1900 (TWO-HUB SCENARIO)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Prescott, AZ to Las Vegas, NV. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Prescott, AZ's PFC = | $3 |
| | Las Vegas, NV's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Prescott, AZ and Las Vegas, NV | 9,843 | 27 | 193 | $100 | $0.447 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 27.0 | > LDF | 62 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 13.5 | 71.0% | 62 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 9.0 | 47.3% | 62 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 6.7 | 35.5% | 62 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 5.4 | 28.4% | 62 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 4.5 | 23.7% | 62 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $527 | $355 | $882 | $33 | $43 | $57 |
| BEECH 1900 | 2 | $1,053 | $709 | $1,762 | $65 | $82 | $18 |
| BEECH 1900 | 3 | $1,580 | $1,064 | $2,644 | $98 | $122 | ($22) |
| BEECH 1900 | 4 | $2,106 | $1,419 | $3,525 | $131 | $161 | ($61) |
| BEECH 1900 | 5 | $2,633 | $1,774 | $4,407 | $163 | $200 | ($100) |
| BEECH 1900 | 6 | $3,160 | $2,128 | $5,288 | $196 | $239 | ($139) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $561,051 |
| BEECH 1900 | 2 | $177,174 |
| BEECH 1900 | 3 | ($216,546) |
| BEECH 1900 | 4 | ($600,423) |
| BEECH 1900 | 5 | ($984,300) |
| BEECH 1900 | 6 | ($1,368,177) |

TABLE 7-44

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS PRESCOTT - PHOENIX
BEECH 19000 (TWO-HUB SCENARIO)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Prescott, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Prescott, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Prescott, AZ and Phoenix, AZ | 9,287 | 25 | 74 | $75 | $0.855 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 25.4 | > LDF | 32 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 12.7 | 67.0% | 32 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 8.5 | 44.6% | 32 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 6.4 | 33.5% | 32 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 5.1 | 26.8% | 32 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 4.2 | 22.3% | 32 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $267 | $180 | $447 | $18 | $25 | $50 |
| BEECH 1900 | 2 | $534 | $360 | $894 | $35 | $46 | $29 |
| BEECH 1900 | 3 | $802 | $540 | $1,342 | $53 | $67 | $8 |
| BEECH 1900 | 4 | $1,069 | $720 | $1,789 | $70 | $88 | ($13) |
| BEECH 1900 | 5 | $1,336 | $900 | $2,236 | $88 | $109 | ($34) |
| BEECH 1900 | 6 | $1,603 | $1,080 | $2,683 | $105 | $130 | ($55) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $464,350 |
| BEECH 1900 | 2 | $269,323 |
| BEECH 1900 | 3 | $74,296 |
| BEECH 1900 | 4 | ($120,731) |
| BEECH 1900 | 5 | ($315,758) |
| BEECH 1900 | 6 | ($510,785) |

support three flights a day on the 19-passenger Beech 1900 with a seven-day per week schedule.

Overall, the route analysis indicated that Prescott's potential demand level can support up to five flights a day if service were provided to both Las Vegas and Phoenix, and up to six flights a day if service were provided solely to Phoenix using the Beech 1900. There are currently four scheduled daily departures on America West Express to Phoenix. Although these flights are nonstop between Prescott and Phoenix, they originate in Kingman and stop in Prescott en-route to Phoenix. These flights are all currently flown on the Beech 1900 aircraft.

While this level of service is theoretically possible for the Prescott market, the reality of obtaining and maintaining this level of service in the Prescott market will be impacted by many factors. These factors, as well as marketing strategies for attracting or improving service to Prescott will be discussed in the following chapter.

## H. Safford

Currently there is no scheduled commercial airline service available in the Safford market. Based on potential demand levels identified in this study and top destinations for all of the study airports, the route analyses for Safford focused on this market's ability to support scheduled airline service to Phoenix. **Tables 7-45** through **7-47** present the results of the route analyses performed for service from Safford to Phoenix.

To evaluate the feasibility of service to Phoenix, total potential enplanements as determined in the previous chapter, were used in conducting the route analyses. The route analysis determined that it would be financially feasible to support one flight at day on the 19-passenger Beech 1900 or the nine-passenger Beech King Air aircraft on a seven-day per week schedule between Safford and Phoenix. Operating the Beech King Air on a six-day per week schedule, two flights per day would be financially feasible. To achieve more frequent levels of scheduled service in this market would most likely require some type of operating subsidy. Safford would not qualify for federal airline subsidies under the current guidelines in the EAS program.

While commercial airline service is theoretically possible for the Safford market, actually attracting and supporting service in this market will be impacted by several factors. These factors and a marketing strategy for Safford will be discussed in the following chapter.

TABLE 7-45

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SAFFORD - PHOENIX
BEECH 1900 (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Safford, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Safford, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Safford, AZ and Phoenix, AZ | 5,640 | 15 | 146 | $75 | $0.434 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 15.5 | 81.3% | 50 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 7.7 | 40.7% | 50 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 5.2 | 27.1% | 50 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 3.9 | 20.3% | 50 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 3.1 | 16.3% | 50 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 2.6 | 13.6% | 50 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $424 | $286 | $710 | $46 | $59 | $16 |
| BEECH 1900 | 2 | $848 | $571 | $1,419 | $92 | $114 | ($39) |
| BEECH 1900 | 3 | $1,272 | $857 | $2,129 | $138 | $169 | ($94) |
| BEECH 1900 | 4 | $1,697 | $1,143 | $2,840 | $184 | $224 | ($149) |
| BEECH 1900 | 5 | $2,121 | $1,428 | $3,549 | $230 | $279 | ($204) |
| BEECH 1900 | 6 | $2,545 | $1,714 | $4,259 | $276 | $334 | ($259) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $90,240 |
| BEECH 1900 | 2 | ($219,960) |
| BEECH 1900 | 3 | ($530,160) |
| BEECH 1900 | 4 | ($840,360) |
| BEECH 1900 | 5 | ($1,150,560) |
| BEECH 1900 | 6 | ($1,460,760) |

TABLE 7-46

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SAFFORD - PHOENIX
BEECH KING AIR (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Safford, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Safford, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Safford, AZ and Phoenix, AZ | 5,640 | 15 | 146 | $75 | $0.434 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 15.5 | > LDF | 50 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 7.7 | 85.8% | 50 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 5.2 | 57.2% | 50 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 3.9 | 42.9% | 50 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 3.1 | 34.3% | 50 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 2.6 | 28.6% | 50 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $285 | $192 | $477 | $31 | $41 | $34 |
| BEECH KING AIR | 2 | $569 | $384 | $953 | $62 | $78 | ($3) |
| BEECH KING AIR | 3 | $854 | $575 | $1,429 | $93 | $115 | ($40) |
| BEECH KING AIR | 4 | $1,139 | $767 | $1,906 | $123 | $152 | ($77) |
| BEECH KING AIR | 5 | $1,424 | $959 | $2,383 | $154 | $189 | ($114) |
| BEECH KING AIR | 6 | $1,708 | $1,151 | $2,859 | $185 | $226 | ($151) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $191,760 |
| BEECH KING AIR | 2 | ($16,920) |
| BEECH KING AIR | 3 | ($225,600) |
| BEECH KING AIR | 4 | ($434,280) |
| BEECH KING AIR | 5 | ($642,960) |
| BEECH KING AIR | 6 | ($851,640) |

TABLE 7-47

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SAFFORD - PHOENIX
BEECH KING AIR (6-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Safford, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 6 Days per Week Schedule | |
| **PFCs:** | Safford, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Safford, AZ and Phoenix, AZ | 5,640 | 18 | 146 | $75 | $0.434 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 18.1 | > LDF | 50 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 9.0 | > LDF | 50 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 6.0 | 67.0% | 50 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 4.5 | 50.2% | 50 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 3.6 | 40.2% | 50 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 3.0 | 33.5% | 50 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $285 | $192 | $477 | $26 | $36 | $39 |
| BEECH KING AIR | 2 | $569 | $384 | $953 | $53 | $67 | $8 |
| BEECH KING AIR | 3 | $854 | $575 | $1,429 | $79 | $99 | ($24) |
| BEECH KING AIR | 4 | $1,139 | $767 | $1,906 | $105 | $130 | ($55) |
| BEECH KING AIR | 5 | $1,424 | $959 | $2,383 | $132 | $162 | ($87) |
| BEECH KING AIR | 6 | $1,708 | $1,151 | $2,859 | $158 | $194 | ($119) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $219,960 |
| BEECH KING AIR | 2 | $45,120 |
| BEECH KING AIR | 3 | ($135,360) |
| BEECH KING AIR | 4 | ($310,200) |
| BEECH KING AIR | 5 | ($490,680) |
| BEECH KING AIR | 6 | ($671,160) |

## I. Sedona

Although the Sedona Airport has historically had commercial air service, currently there is no airline serving this market. Much of the air traffic from Sedona is considered potential charter traffic that would utilize service to visit the area. Based on historical service that has been provided to the airport, potential demand levels identified in the previous chapter, and top destinations for all of the study airports, the route analyses for Sedona focused on the market's ability to support regularly scheduled airline service to Phoenix. **Tables 7-48** through **7-50** present the results of the route analyses performed for service from Sedona to Phoenix.

To evaluate the feasibility of service to Phoenix, a total potential enplanement level of 6,284 was used. This enplanement level represents the total potential passenger demand level for Sedona. The route analysis determined that it would be financially profitable to operate a 19-passenger Beech 1900 aircraft at the rate of one flight a day on a seven-day per week schedule. Using a nine-passenger Beech King Air on a seven-day per week schedule, two flights per day could be supported. If a six-day per week schedule were used while operating the Beech King Air, three flights a day could be supported.

While this level of service is theoretically possible for the Sedona market, actually attracting and supporting service in this market will be impacted by several factors. These factors and a marketing strategy for Sedona will be discussed in the following chapter.

## J. Show Low

Show Low Municipal Airport currently has year-round commercial air service on Sunrise Airlines to Phoenix. This service is provided using a nine-passenger Beech King Air aircraft. Based on historical service that has been provided to the airport, potential demand levels identified in this study, and top destinations for all of the study airports, the route analyses for Show Low focused on the level of airline service that could be provided to Phoenix. **Tables 7-51** through **7-53** present the results of the route analyses performed for service from Show Low to Phoenix.

To evaluate the financial feasibility of scheduled passenger service to Phoenix, total potential enplanements (6,964), as determined in the previous chapter, were used in conducting the route analyses. The route analysis determined that it would be financially feasible to support one flight a day while operating a 19-passenger Beech 1900 aircraft between Show Low and Phoenix, assuming a seven-day per week schedule. Operating the smaller nine-passenger Beech King Air would support two flights a day on a seven-day per week schedule. If the schedule is reduced to a six-day per week schedule, operating the Beech King Air, three flights a day can be supported in the Show Low market. There are currently three scheduled daily departures on Sunrise Airlines to Phoenix. These flights are all currently flown using Beech King Air aircraft.

TABLE 7-48

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SEDONA - PHOENIX
BEECH 1900 (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Sedona, AZ to Phoenix, AZ. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Sedona, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Sedona, AZ and Phoenix, AZ | 6,284 | 17 | 92 | $75 | $0.688 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 17.2 | 90.6% | 36 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 8.6 | 45.3% | 36 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 5.7 | 30.2% | 36 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 4.3 | 22.7% | 36 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 3.4 | 18.1% | 36 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 2.9 | 15.1% | 36 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $306 | $206 | $512 | $30 | $40 | $35 |
| BEECH 1900 | 2 | $613 | $413 | $1,026 | $60 | $75 | $0 |
| BEECH 1900 | 3 | $919 | $619 | $1,538 | $89 | $111 | ($36) |
| BEECH 1900 | 4 | $1,226 | $826 | $2,052 | $119 | $147 | ($72) |
| BEECH 1900 | 5 | $1,532 | $1,032 | $2,564 | $149 | $183 | ($108) |
| BEECH 1900 | 6 | $1,839 | $1,238 | $3,077 | $179 | $218 | ($143) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $219,940 |
| BEECH 1900 | 2 | $0 |
| BEECH 1900 | 3 | ($226,224) |
| BEECH 1900 | 4 | ($452,448) |
| BEECH 1900 | 5 | ($678,672) |
| BEECH 1900 | 6 | ($898,612) |

TABLE 7-49

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SEDONA - PHOENIX
BEECH KING AIR (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Sedona, AZ to Phoenix, AZ. (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Sedona, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Sedona, AZ and Phoenix, AZ | 6,284 | 17 | 92 | $75 | $0.688 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 17.2 | > LDF | 36 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 8.6 | 95.6% | 36 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 5.7 | 63.8% | 36 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 4.3 | 47.8% | 36 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 3.4 | 38.3% | 36 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 2.9 | 31.9% | 36 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $206 | $139 | $345 | $20 | $28 | $47 |
| BEECH KING AIR | 2 | $411 | $277 | $688 | $40 | $52 | $23 |
| BEECH KING AIR | 3 | $617 | $416 | $1,033 | $60 | $76 | ($1) |
| BEECH KING AIR | 4 | $823 | $554 | $1,377 | $80 | $100 | ($25) |
| BEECH KING AIR | 5 | $1,028 | $693 | $1,721 | $100 | $124 | ($49) |
| BEECH KING AIR | 6 | $1,234 | $831 | $2,065 | $120 | $148 | ($73) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $295,348 |
| BEECH KING AIR | 2 | $144,532 |
| BEECH KING AIR | 3 | ($6,284) |
| BEECH KING AIR | 4 | ($157,100) |
| BEECH KING AIR | 5 | ($307,916) |
| BEECH KING AIR | 6 | ($458,732) |

TABLE 7-50

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SEDONA - PHOENIX
BEECH KING AIR (6-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Sedona, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| Schedule: | 6 Days per Week Schedule | |
| PFCs: | Sedona, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Sedona, AZ and Phoenix, AZ | 6,284 | 20 | 92 | $75 | $0.688 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 20.1 | > LDF | 36 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 10.1 | > LDF | 36 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 6.7 | 74.6% | 36 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 5.0 | 55.9% | 36 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 4.0 | 44.8% | 36 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 3.4 | 37.3% | 36 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $206 | $139 | $345 | $17 | $24 | $51 |
| BEECH KING AIR | 2 | $411 | $277 | $688 | $34 | $45 | $30 |
| BEECH KING AIR | 3 | $617 | $416 | $1,033 | $51 | $65 | $10 |
| BEECH KING AIR | 4 | $823 | $554 | $1,377 | $68 | $86 | ($11) |
| BEECH KING AIR | 5 | $1,028 | $693 | $1,721 | $85 | $106 | ($31) |
| BEECH KING AIR | 6 | $1,234 | $831 | $2,065 | $103 | $127 | ($52) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $320,484 |
| BEECH KING AIR | 2 | $188,520 |
| BEECH KING AIR | 3 | $62,840 |
| BEECH KING AIR | 4 | ($69,124) |
| BEECH KING AIR | 5 | ($194,804) |
| BEECH KING AIR | 6 | ($326,768) |

TABLE 7-51

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SHOW LOW - PHOENIX
BEECH 1900 (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Show Low, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| Schedule: | 7 Days per Week Schedule | |
| PFCs: | Show Low, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Show Low, AZ and Phoenix, AZ | 6,964 | 19 | 126 | $75 | $0.502 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 19.1 | > LDF | 45 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 9.5 | 50.2% | 45 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 6.4 | 33.5% | 45 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 4.8 | 25.1% | 45 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 3.8 | 20.1% | 45 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 3.2 | 16.7% | 45 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | $381 | $256 | $637 | $33 | $44 | $31 |
| BEECH 1900 | 2 | $761 | $513 | $1,274 | $67 | $84 | ($9) |
| BEECH 1900 | 3 | $1,142 | $769 | $1,911 | $100 | $124 | ($49) |
| BEECH 1900 | 4 | $1,522 | $1,025 | $2,547 | $134 | $164 | ($89) |
| BEECH 1900 | 5 | $1,903 | $1,282 | $3,185 | $167 | $204 | ($129) |
| BEECH 1900 | 6 | $2,283 | $1,538 | $3,821 | $200 | $244 | ($169) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $215,884 |
| BEECH 1900 | 2 | ($62,676) |
| BEECH 1900 | 3 | ($341,236) |
| BEECH 1900 | 4 | ($619,796) |
| BEECH 1900 | 5 | ($898,356) |
| BEECH 1900 | 6 | ($1,176,916) |

TABLE 7-52

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SHOW LOW - PHOENIX
BEECH KING AIR (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Show Low, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| Schedule: | 7 Days per Week Schedule | |
| PFCs: | Show Low, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Show Low, AZ and Phoenix, AZ | 6,964 | 19 | 126 | $75 | $0.502 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 19.1 | > LDF | 45 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 9.5 | > LDF | 45 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 6.4 | 70.7% | 45 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 4.8 | 53.0% | 45 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 3.8 | 42.4% | 45 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 3.2 | 35.3% | 45 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $255 | $172 | $427 | $22 | $31 | $44 |
| BEECH KING AIR | 2 | $511 | $344 | $855 | $45 | $58 | $17 |
| BEECH KING AIR | 3 | $766 | $516 | $1,282 | $67 | $85 | ($10) |
| BEECH KING AIR | 4 | $1,022 | $688 | $1,710 | $90 | $111 | ($36) |
| BEECH KING AIR | 5 | $1,277 | $860 | $2,137 | $112 | $138 | ($63) |
| BEECH KING AIR | 6 | $1,533 | $1,032 | $2,565 | $134 | $165 | ($90) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $306,416 |
| BEECH KING AIR | 2 | $118,388 |
| BEECH KING AIR | 3 | ($69,640) |
| BEECH KING AIR | 4 | ($250,704) |
| BEECH KING AIR | 5 | ($438,732) |
| BEECH KING AIR | 6 | ($626,760) |

TABLE 7-53

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SHOW LOW - PHOENIX
BEECH KING AIR (6-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Show Low, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 6 Days per Week Schedule | |
| **PFCs:** | Show Low, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Show Low, AZ and Phoenix, AZ | 6,964 | 22 | 126 | $75 | $0.502 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 22.3 | > LDF | 45 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 11.2 | > LDF | 45 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 7.4 | 82.7% | 45 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 5.6 | 62.0% | 45 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 4.5 | 49.6% | 45 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 3.7 | 41.3% | 45 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $255 | $172 | $427 | $19 | $27 | $48 |
| BEECH KING AIR | 2 | $511 | $344 | $855 | $38 | $50 | $25 |
| BEECH KING AIR | 3 | $766 | $516 | $1,282 | $57 | $73 | $2 |
| BEECH KING AIR | 4 | $1,022 | $688 | $1,710 | $77 | $96 | ($21) |
| BEECH KING AIR | 5 | $1,277 | $860 | $2,137 | $96 | $119 | ($44) |
| BEECH KING AIR | 6 | $1,533 | $1,032 | $2,565 | $115 | $142 | ($67) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $334,272 |
| BEECH KING AIR | 2 | $174,100 |
| BEECH KING AIR | 3 | $13,928 |
| BEECH KING AIR | 4 | ($146,244) |
| BEECH KING AIR | 5 | ($306,416) |
| BEECH KING AIR | 6 | ($466,588) |

Results of the route analysis show that this market's current service is well matched to the level of service that the route analysis indicates that this market can profitably support. An action plan for this market is included in the next section of the study.

## K. Sierra Vista

Sierra Vista Municipal Airport currently has year-round regional/commuter service on America West Express to Phoenix. This service is provided using 19-passenger Beech 1900 aircraft. Based on historical service that has been provided to the airport, potential demand levels identified in the previous chapter, and the distance to existing hubs, the route analyses focused on the level of service that could be supported to Phoenix. Las Vegas was not considered for this market even though it is an intermediate-category market because of the distance to Las Vegas from Sierra Vista. The stage length between Sierra Vista and Las Vegas is beyond the range of typical turboprop regional/commuter aircraft. **Tables 7-54** and **7-55** present the results of the route analyses performed for the Sierra Vista market.

Sierra Vista's total potential demand of 27,305 was used as an input to the route analysis model. The route analysis indicated that five flights a day to Phoenix could be supported operating a Dash-8-200B aircraft on a seven-day per week schedule. Operating the smaller 19-passenger Beech 1900 aircraft on a seven-day per week schedule, seven flights a day could be supported between Sierra Vista and Phoenix. There are currently five scheduled daily departures on America West Express to Phoenix. These flights are all operated using the Beech 1900.

While this level of service is theoretically financially feasible for the Sierra Vista market, actually improving and maintaining the service in this market could be impacted by a number of factors. These factors and a marketing strategy for Sierra Vista will be discussed in the next chapter.

## L. Winslow-Holbrook

Historically, Winslow had a significant level of commercial passenger air service; however, today there is no operator providing passenger service in this market. Based on historical service that has been provided to the airport, potential demand levels identified in the previous chapter and top destinations for all of the study airports, the route analyses for Winslow-Holbrook focused on the market's ability to support airline service to Phoenix. **Tables 7-56** through **7-58** present the results of the route analyses performed for possible service from Winslow-Holbrook to Phoenix.

TABLE 7-54

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SIERRA VISTA - PHOENIX
DASH-8-200B

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Sierra Vista, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Sierra Vista, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Sierra Vista, AZ and Phoenix, AZ | 27,305 | 75 | 170 | $100 | $0.507 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 1 | 37 | 74.8 | > LDF | 52 | 0% | 0% |
| DASH-8-200B | 2 | 37 | 37.4 | > LDF | 52 | 0% | 0% |
| DASH-8-200B | 3 | 37 | 24.9 | 67.4% | 52 | 0% | 0% |
| DASH-8-200B | 4 | 37 | 18.7 | 50.5% | 52 | 0% | 0% |
| DASH-8-200B | 5 | 37 | 15.0 | 40.4% | 52 | 0% | 0% |
| DASH-8-200B | 6 | 37 | 12.5 | 33.7% | 52 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 1 | $688 | $464 | $1,152 | $15 | $22 | $78 |
| DASH-8-200B | 2 | $1,376 | $927 | $2,303 | $31 | $41 | $59 |
| DASH-8-200B | 3 | $2,064 | $1,391 | $3,455 | $46 | $59 | $41 |
| DASH-8-200B | 4 | $2,753 | $1,854 | $4,607 | $62 | $78 | $22 |
| DASH-8-200B | 5 | $3,441 | $2,318 | $5,759 | $77 | $96 | $4 |
| DASH-8-200B | 6 | $4,129 | $2,781 | $6,910 | $92 | $115 | ($15) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 1 | $2,129,790 |
| DASH-8-200B | 2 | $1,610,995 |
| DASH-8-200B | 3 | $1,119,505 |
| DASH-8-200B | 4 | $600,710 |
| DASH-8-200B | 5 | $109,220 |
| DASH-8-200B | 6 | ($409,575) |

TABLE 7-55

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS SIERRA VISTA - PHOENIX
BEECH 1900

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Sierra Vista, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Sierra Vista, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Sierra Vista, AZ and Phoenix, AZ | 27,305 | 75 | 170 | $100 | $0.507 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OEF) | Aircraft Erosion (OEF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 3 | 19 | 24.9 | > LDF | 56 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 18.7 | 98.4% | 56 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 15.0 | 78.7% | 56 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 12.5 | 65.6% | 56 | 0% | 0% |
| BEECH 1900 | 7 | 19 | 10.7 | 56.2% | 56 | 0% | 0% |
| BEECH 1900 | 8 | 19 | 9.4 | 49.2% | 56 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 3 | $1,429 | $963 | $2,392 | $32 | $42 | $58 |
| BEECH 1900 | 4 | $1,906 | $1,284 | $3,190 | $43 | $55 | $45 |
| BEECH 1900 | 5 | $2,382 | $1,605 | $3,987 | $53 | $68 | $32 |
| BEECH 1900 | 6 | $2,859 | $1,926 | $4,785 | $64 | $81 | $19 |
| BEECH 1900 | 7 | $3,335 | $2,247 | $5,582 | $75 | $93 | $7 |
| BEECH 1900 | 8 | $3,812 | $2,568 | $6,380 | $85 | $106 | ($6) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 3 | $1,583,690 |
| BEECH 1900 | 4 | $1,228,725 |
| BEECH 1900 | 5 | $873,760 |
| BEECH 1900 | 6 | $518,795 |
| BEECH 1900 | 7 | $191,135 |
| BEECH 1900 | 8 | ($163,830) |

TABLE 7-56

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS WINSLOW - PHOENIX
BEECH 1900 (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Winslow, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Winslow, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential | |
|---|---|---|---|---|---|
| | Annual | Daily | Length | SIFL 1-Way Fare | SIFL Yield /CPM |
| Between Winslow, AZ and Phoenix, AZ | 4,298 | 12 | 129 | $75 | $0.491 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH 1900 | 1 | 19 | 11.8 | 62.0% | 46 | 0% | 0% |
| BEECH 1900 | 2 | 19 | 5.9 | 31.0% | 46 | 0% | 0% |
| BEECH 1900 | 3 | 19 | 3.9 | 20.7% | 46 | 0% | 0% |
| BEECH 1900 | 4 | 19 | 2.9 | 15.5% | 46 | 0% | 0% |
| BEECH 1900 | 5 | 19 | 2.4 | 12.4% | 46 | 0% | 0% |
| BEECH 1900 | 6 | 19 | 2.0 | 10.3% | 46 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs | | | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| | | Direct | Other | Total | | | |
| BEECH 1900 | 1 | $387 | $261 | $648 | $55 | $70 | $5 |
| BEECH 1900 | 2 | $774 | $521 | $1,295 | $110 | $136 | ($61) |
| BEECH 1900 | 3 | $1,161 | $782 | $1,943 | $165 | $202 | ($127) |
| BEECH 1900 | 4 | $1,548 | $1,043 | $2,591 | $220 | $268 | ($193) |
| BEECH 1900 | 5 | $1,935 | $1,304 | $3,239 | $275 | $334 | ($259) |
| BEECH 1900 | 6 | $2,323 | $1,564 | $3,887 | $330 | $400 | ($325) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH 1900 | 1 | $21,490 |
| BEECH 1900 | 2 | ($262,178) |
| BEECH 1900 | 3 | ($545,846) |
| BEECH 1900 | 4 | ($829,514) |
| BEECH 1900 | 5 | ($1,113,182) |
| BEECH 1900 | 6 | ($1,396,850) |

TABLE 7-57

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS WINSLOW - PHOENIX
BEECH KING AIR (7-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Winslow, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Winslow, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential | |
|---|---|---|---|---|---|
| | Annual | Daily | Length | SIFL 1-Way Fare | SIFL Yield /CPM |
| Between Winslow, AZ and Phoenix, AZ | 4,298 | 12 | 129 | $75 | $0.491 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 11.8 | > LDF | 46 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 5.9 | 65.4% | 46 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 3.9 | 43.6% | 46 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 2.9 | 32.7% | 46 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 2.4 | 26.2% | 46 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 2.0 | 21.8% | 46 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs | | | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| | | Direct | Other | Total | | | |
| BEECH KING AIR | 1 | $260 | $175 | $435 | $37 | $48 | $27 |
| BEECH KING AIR | 2 | $520 | $350 | $870 | $74 | $93 | ($18) |
| BEECH KING AIR | 3 | $780 | $525 | $1,305 | $111 | $137 | ($62) |
| BEECH KING AIR | 4 | $1,039 | $700 | $1,739 | $148 | $181 | ($106) |
| BEECH KING AIR | 5 | $1,299 | $875 | $2,174 | $185 | $225 | ($150) |
| BEECH KING AIR | 6 | $1,559 | $1,050 | $2,609 | $222 | $270 | ($195) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $116,046 |
| BEECH KING AIR | 2 | ($77,364) |
| BEECH KING AIR | 3 | ($266,476) |
| BEECH KING AIR | 4 | ($455,588) |
| BEECH KING AIR | 5 | ($644,700) |
| BEECH KING AIR | 6 | ($838,110) |

TABLE 7-58

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS WINSLOW - PHOENIX
BEECH KING AIR (6-DAY SCHEDULE)

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| Route: | Nonstop Service from Winslow, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| Schedule: | 6 Days per Week Schedule | |
| PFCs: | Winslow, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Winslow, AZ and Phoenix, AZ | 4,298 | 14 | 129 | $75 | $0.491 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | 9 | 13.8 | > LDF | 46 | 0% | 0% |
| BEECH KING AIR | 2 | 9 | 6.9 | 76.5% | 46 | 0% | 0% |
| BEECH KING AIR | 3 | 9 | 4.6 | 51.0% | 46 | 0% | 0% |
| BEECH KING AIR | 4 | 9 | 3.4 | 38.3% | 46 | 0% | 0% |
| BEECH KING AIR | 5 | 9 | 2.8 | 30.6% | 46 | 0% | 0% |
| BEECH KING AIR | 6 | 9 | 2.3 | 25.5% | 46 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| BEECH KING AIR | 1 | $260 | $175 | $435 | $32 | $42 | $33 |
| BEECH KING AIR | 2 | $520 | $350 | $870 | $63 | $80 | ($5) |
| BEECH KING AIR | 3 | $780 | $525 | $1,305 | $95 | $118 | ($43) |
| BEECH KING AIR | 4 | $1,039 | $700 | $1,739 | $126 | $155 | ($80) |
| BEECH KING AIR | 5 | $1,299 | $875 | $2,174 | $158 | $193 | ($118) |
| BEECH KING AIR | 6 | $1,559 | $1,050 | $2,609 | $189 | $231 | ($156) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| BEECH KING AIR | 1 | $141,834 |
| BEECH KING AIR | 2 | ($21,490) |
| BEECH KING AIR | 3 | ($184,814) |
| BEECH KING AIR | 4 | ($343,840) |
| BEECH KING AIR | 5 | ($507,164) |
| BEECH KING AIR | 6 | ($670,488) |

To evaluate the financial feasibility of scheduled passenger service to Phoenix, total potential enplanements (4,298), as determined in the previous chapter, were used in conducting the route analyses. The route analysis determined that it would be financially feasible to support one flight a day while operating a 19-passenger Beech 1900 aircraft; this assumes a seven-day per week schedule. Operating the smaller nine-passenger Beech King Air, one flight a day could be supported on a seven-day per week schedule. If the schedule is reduced to a six-day per week schedule, operating the Beech King Air, again only one flight a day could be supported.

While this level of service is theoretically feasible for the Winslow-Holbrook market, actually attracting and supporting service in this market will be impacted by several factors. These factors and a marketing strategy for Winslow-Holbrook will be discussed in the following chapter.

## M. Yuma

Yuma International Airport currently has year-round regional/commuter service to both Phoenix and Los Angeles. Service to Phoenix is provided by America West Express on Dash-8 and Beech 1900 aircraft. Service to Los Angeles is provided by United Express on Embraer EMB-120 Brasilia aircraft.

The hub assignment process and route analyses for Yuma focused on evaluating the current level of service that is provided to Los Angeles and Phoenix. Based on historical service that has been provided to this airport, potential passenger demand levels identified in this study, and the hub assignment process, the route analysis for Yuma focused on the optimum level of service that the Yuma market could support. This optimal level of commercial airline service can then be compared to the current level of service provided in the market to determine if improvements to current levels of service are warranted and economically viable. **Tables 7-59** through **7-61** present the results of the route analyses performed for Yuma to its existing hubs, Los Angeles and Phoenix. The results of the route analysis for Yuma are discussed in the following sections:

- Los Angeles - Yuma International Airport, located near the Arizona-California border, draws a number of its passengers from California markets and has a significant level of passenger demand traveling to other California destinations. This makes service to Los Angeles a logical choice. To determine the level of service that could be supported in the market, a potential demand number of 43,377 enplanements was used. This demand level represents demand destined for cities in states such as California, Hawaii, Nevada, Utah, and Washington. With this level of potential passenger demand, seven flights a day could theocratically be supported using the 50-seat Canadair-RJ-100 aircraft. Operating the smaller 30-seat Embraer 120, nine flights a day could be financially feasible. Both aircraft were considered using a seven-day per week schedule.

TABLE 7-59

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS YUMA - LOS ANGELES
CANADAIR RJ-100

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Yuma, AZ to Los Angeles, CA. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Yuma, AZ's PFC = | $3 |
| | Los Angeles, CA's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential SIFL 1-Way | SIFL Yield |
|---|---|---|---|---|---|
| | Annual | Daily | Length | Fare | /CPM |
| Between Yuma, AZ and Los Angeles, CA | 43,377 | 119 | 240 | $120 | $0.436 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| CANADAIR RJ-100 | 3 | 50 | 39.6 | 79.2% | 48 | 0% | 0% |
| CANADAIR RJ-100 | 4 | 50 | 29.7 | 59.4% | 48 | 0% | 0% |
| CANADAIR RJ-100 | 5 | 50 | 23.8 | 47.5% | 48 | 0% | 0% |
| CANADAIR RJ-100 | 6 | 50 | 19.8 | 39.6% | 48 | 0% | 0% |
| CANADAIR RJ-100 | 7 | 50 | 17.0 | 34.0% | 48 | 0% | 0% |
| CANADAIR RJ-100 | 8 | 50 | 14.9 | 29.7% | 48 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| CANADAIR RJ-100 | 3 | $2,614 | $1,761 | $4,375 | $37 | $48 | $72 |
| CANADAIR RJ-100 | 4 | $3,486 | $2,348 | $5,834 | $49 | $63 | $57 |
| CANADAIR RJ-100 | 5 | $4,357 | $2,935 | $7,292 | $61 | $78 | $42 |
| CANADAIR RJ-100 | 6 | $5,228 | $3,522 | $8,750 | $74 | $92 | $28 |
| CANADAIR RJ-100 | 7 | $6,100 | $4,109 | $10,209 | $86 | $107 | $13 |
| CANADAIR RJ-100 | 8 | $6,971 | $4,696 | $11,667 | $98 | $122 | ($2) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| CANADAIR RJ-100 | 3 | $3,123,144 |
| CANADAIR RJ-100 | 4 | $2,472,489 |
| CANADAIR RJ-100 | 5 | $1,821,834 |
| CANADAIR RJ-100 | 6 | $1,214,556 |
| CANADAIR RJ-100 | 7 | $563,901 |
| CANADAIR RJ-100 | 8 | ($86,754) |

TABLE 7-60

Arizona Department of Transportation
Air Service Analysis

ROUTE ANALYSIS YUMA - LOS ANGELES
EMBRAER 120

*AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY*

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Yuma, AZ to Los Angeles, CA. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Yuma, AZ's PFC = | $3 |
| | Los Angeles, CA's PFC = | $3 |

**Summary:**

| | Enplanements | | | Market Rev Potential | |
|---|---|---|---|---|---|
| | Annual | Daily | Stage Length | SIFL 1-Way Fare | SIFL Yield /CPM |
| Between Yuma, AZ and Los Angeles, CA | 43,377 | 119 | 240 | $120 | $0.436 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 5 | 30 | 23.8 | 79.2% | 65 | 0% | 0% |
| EMBRAER 120 | 6 | 30 | 19.8 | 66.0% | 65 | 0% | 0% |
| EMBRAER 120 | 7 | 30 | 17.0 | 56.6% | 65 | 0% | 0% |
| EMBRAER 120 | 8 | 30 | 14.9 | 49.5% | 65 | 0% | 0% |
| EMBRAER 120 | 9 | 30 | 13.2 | 44.0% | 65 | 0% | 0% |
| EMBRAER 120 | 10 | 30 | 11.9 | 39.6% | 65 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs Direct | Other | Total | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| EMBRAER 120 | 5 | $3,758 | $2,531 | $6,289 | $53 | $67 | $53 |
| EMBRAER 120 | 6 | $4,509 | $3,037 | $7,546 | $64 | $80 | $40 |
| EMBRAER 120 | 7 | $5,261 | $3,544 | $8,805 | $74 | $93 | $27 |
| EMBRAER 120 | 8 | $6,013 | $4,050 | $10,063 | $85 | $106 | $14 |
| EMBRAER 120 | 9 | $6,764 | $4,556 | $11,320 | $95 | $118 | $2 |
| EMBRAER 120 | 10 | $7,516 | $5,062 | $12,578 | $106 | $131 | ($11) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| EMBRAER 120 | 5 | $2,298,981 |
| EMBRAER 120 | 6 | $1,735,080 |
| EMBRAER 120 | 7 | $1,171,179 |
| EMBRAER 120 | 8 | $607,278 |
| EMBRAER 120 | 9 | $86,754 |
| EMBRAER 120 | 10 | ($477,147) |

TABLE 7-61

**Arizona Department of Transportation**
**Air Service Analysis**

## ROUTE ANALYSIS YUMA - PHOENIX
## DASH-8-200B

***AIR SERVICE MODEL - ROUTE ANALYSIS SUMMARY***

| | | |
|---|---|---|
| **Route:** | Nonstop Service from Yuma, AZ to Phoenix, AZ. | |
| | (Low Competition Market) | |
| **Schedule:** | 7 Days per Week Schedule | |
| **PFCs:** | Yuma, AZ's PFC = | $3 |
| | Phoenix, AZ's PFC = | $3 |

**Summary:**

| | Enplanements | | Stage | Market Rev Potential | |
|---|---|---|---|---|---|
| | Annual | Daily | Length | SIFL 1-Way Fare | SIFL Yield /CPM |
| Between Yuma, AZ and Phoenix, AZ | 64,002 | 175 | 159 | $80 | $0.427 |

**Aircraft Operational Data:**

| Aircraft | Number of Daily Departures | Number of Seats | Enplanements Per Flight | Average Load Factor | Block Time (Min) | Schedule Erosion (OFF) | Aircraft Erosion (OFF) |
|---|---|---|---|---|---|---|---|
| DASH-8-200B | 6 | 37 | 29.2 | 79.0% | 50 | 0% | 0% |
| DASH-8-200B | 7 | 37 | 25.0 | 67.7% | 50 | 0% | 0% |
| DASH-8-200B | 8 | 37 | 21.9 | 59.2% | 50 | 0% | 0% |
| DASH-8-200B | 9 | 37 | 19.5 | 52.7% | 50 | 0% | 0% |
| DASH-8-200B | 10 | 37 | 17.5 | 47.4% | 50 | 0% | 0% |
| DASH-8-200B | 11 | 37 | 15.9 | 43.1% | 50 | 0% | 0% |

**Costs and Fares:**

| Aircraft | Number of Daily Departures | Daily One-Way Aircraft Costs | | | One-Way Cost per Enplanement | Breakeven Avg Minimum One-Way Fare | Profit (Loss) per Enplanement |
|---|---|---|---|---|---|---|---|
| | | Direct | Other | Total | | | |
| DASH-8-200B | 6 | $3,925 | $2,644 | $6,569 | $37 | $49 | $31 |
| DASH-8-200B | 7 | $4,580 | $3,085 | $7,665 | $44 | $56 | $24 |
| DASH-8-200B | 8 | $5,234 | $3,525 | $8,759 | $50 | $64 | $16 |
| DASH-8-200B | 9 | $5,888 | $3,966 | $9,854 | $56 | $71 | $9 |
| DASH-8-200B | 10 | $6,542 | $4,407 | $10,949 | $62 | $79 | $1 |
| DASH-8-200B | 11 | $7,197 | $4,848 | $12,045 | $69 | $86 | ($6) |

**Annual Profit (Loss):**

| Aircraft | Number of Daily Departures | One-Way Annual Profit (Loss) |
|---|---|---|
| DASH-8-200B | 6 | $1,984,062 |
| DASH-8-200B | 7 | $1,536,048 |
| DASH-8-200B | 8 | $1,024,032 |
| DASH-8-200B | 9 | $576,018 |
| DASH-8-200B | 10 | $64,002 |
| DASH-8-200B | 11 | ($384,012) |

- Phoenix - Service to Phoenix is currently provided from Yuma by America West Express, operating Dash-8 and Beech 1900 aircraft. The hub assignment process indicates that Phoenix has the ability to capture the highest percentage of this market's potential passenger demand at approximately 70 percent. The annual enplanements used to run the route analysis for the Phoenix hub were derived by subtracting the number of enplanements that were assigned to Los Angeles (43,377) from the total potential enplanement level (107,379) for the Yuma market as identified in the previous chapter. Operating a Dash-8-200B, the Yuma market could support 10 flights per day to Phoenix, according to potential demand estimates and the results of the computerized route analysis. This finding is based on a seven-day per week schedule.

Overall, the route analysis showed that the Yuma market has enough potential passenger demand to support improved service to both Los Angles and Phoenix. The Yuma market can support between 17 and 19 flights per day to the two hubs. Currently, there are six daily flights to Phoenix and five daily flights to Los Angeles for a total of 11 daily flights.

While this level of service is theoretically possible for the Yuma market, actually obtaining this level of service can be impacted by different factors. These factors and a specific marketing strategy for the Yuma market will be discussed in a subsequent chapter.

## 6. SUMMARY

The route analysis for many of the study airports has shown that they have the ability, based on potential demand estimates, to support improved levels of commercial airline service. While improved service is theocratically possible for most of the study airports, actually attracting a carrier or carriers to provide new or improved levels of service to Arizona's smaller and more rural communities presents many challenges. The final section of the Air Service Study will examine, based on certain sensitivity factors, what new and improved service has the greatest probability of actually being implemented and what follow-on actions appear most warranted for each community based on the findings of the route analyses.